

# THE READER

A REVIEW OF LITERATURE, SCIENCE, AND ART.

No. 141, Vol. VI.

Saturday, September 9, 1865.

{ Price Fourpence.  
Stamped, Fivepence.

## CONTENTS.

	PAGE		PAGE
IMEON AND SIMONY .....	279	SCIENCE :—	291
CURRENT LITERATURE :—		THE BRITISH ASSOCIATION .....	291
SIR RICHARD STEELE, KNT .....	280	SCIENTIFIC NOTES .....	296
THE GREEN KNIGHT .....	281	SCIENTIFIC CORRESPONDENCE : THE GLACIAL EPOCH—O. FISHER; SEARLES V. WOOD, JUN. ....	297
CHINESE CLASSICS .....	282	PROCEEDINGS OF FOREIGN ACADEMIES .....	297
SIMANCA .....	283		
NEW NOVELS .....	283		
DANTE AND HIS WORSHIPPERS .....	284		
THE FORTNIGHTLY REVIEW .....	285		
THE MAGAZINES .....	286		
PUBLICATIONS OF THE WEEK .....	287		
OBITUARY .....	287	ART :—	
MISCELLANEA .....	288	THE SOUTH KENSINGTON MUSEUM .....	298
CORRESPONDENCE :—			
THE SEPULCHRE OF CHRIST—GRIMM'S ESSAYS .....	290	MUSIC :—	
		THE FESTIVAL OF THE THREE CHOIRS .....	29
		THE DRAMA .....	30

## CONTENTS OF No. 140.

SLASHING CRITICISM.	
CURRENT LITERATURE :—	
Theodore Parker.	
Our Sea Fisheries.	
Love and War.	
Life in the Hebrides.	
The Belgian Monarchy.	
The Argentine Republics.	
Henri de Rohan.	
Scherer's Essays.	
Holiday Reading for the Young.	
The North British.	
Publications of the Week.	
OBITUARY :—	
Sir William Jackson Hooker.	
MISCELLANEA.	
CORRESPONDENCE :—	
"The Cattle-Plague and Virgil."	
Is Reliable a "Vile Word?"	
The "Social Evil."	

  

SCIENCE :—	
Specific Gravity of the Ocean and Sea Temperature.	
The Archeological Association at Durham.	
The Possibility of Reanimating the Dead.	
Scientific Notes.	
Scientific Correspondence :	
On the Physical Cause of the Submergence of the Land during the Glacial Period.	
Mr. Baker's Nile Discovery.	
Samuel W. Baker.	
The Tides : S. L. T.	
Proceedings of Foreign Academies.	
MUSIC :—	
The Edinburgh Professorship of Music.	
Musical Notes.	

LONDON : 24 TAVISTOCK STREET, COVENT GARDEN.

UNIVERSITY COLLEGE, LONDON.—  
FACULTY of ARTS and LAWS. Session 1865-66.—  
The Session will commence on MONDAY, OCTOBER 9. Introductory Lecture at Three P.M., by MR. T. HAYTER LEWIS, F.S.A., F.I.B.A. Subject: "The Fine Arts and their connexion with Education."

CLASSES.

LATIN—PROFESSOR SEELEY, M.A.	
GREEK—PROFESSOR MALDEN.	
SANSKRIT—PROFESSOR GOLDSTUCKER.	
HEBREW—(Goldsmid Professorship) PROFESSOR MARKS.	
ARABIC and PERSIAN—PROFESSOR RIET, PH.D.	
HINDUSTANI—PROFESSOR SYED ABDOOAH.	
HINDU LAW—PROFESSOR GANENDRA MOHUN TAGORE.	
GUJARATI—PROFESSOR DADARHAI NAVROJI.	
ENGLISH LANGUAGE and LITERATURE — Professor MASSON, M.A.	
FRENCH LANGUAGE and LITERATURE — Professor CASSELL, LL.D.	
ITALIAN LANGUAGE and LITERATURE — Professor De TIVOLI.	
GERMAN LANGUAGE and LITERATURE — Professor HEIMANN, PH.D.	
COMPARATIVE GRAMMAR—PROFESSOR KEY, M.A., F.R.S.	
MATHEMATICS—PROFESSOR DE MORGAN.	
MATHEMATICAL PHYSICS—PROFESSOR HIRST, PH.D., F.R.S.	
EXPERIMENTAL PHYSICS—PROFESSOR FOSTER, B.A.	
PHYSIOLOGY—PROFESSOR SHARPEY, LL.D., M.D., F.R.S.	
CHEMISTRY AND PRACTICAL CHEMISTRY—PROFESSOR WILLIAMSON, F.R.S.	
CIVIL ENGINEERING—PROFESSOR POLE, F.R.S., M.I.C.E.	
ARCHITECTURE — PROFESSOR T. HAYTER LEWIS, F.S.A., F.I.B.A.	
GEOLOGY (Goldsmid Professorship)—PROFESSOR MORRIS, F.G.S.	
MINERALOGY—PROFESSOR MORRIS, F.G.S.	
DRAWING—Teacher, Mr. MOORE.	
BOTANY—PROFESSOR OLIVER, F.R.S.	
ZOOLOGY (Recent and Fossil)—PROFESSOR GRANT, M.D., F.R.S.	
PHILOSOPHY of MIND and LOGIC—PROFESSOR the Rev. J. HOPPUS, PH.D., F.R.S.	
ANCIENT and MODERN HISTORY—PROFESSOR BEESLY, M.A.	
POLITICAL ECONOMY—PROFESSOR WALEY, M.A.	
LAW—PROFESSOR RUSSELL, LL.D.	
JURISPRUDENCE—Professorship vacant.	
PUBLIC READING and SPEAKING—CHARLES FURTADO, Esq.	

EVENING CLASSES by the Professors above-named of the respective Classes—viz., German, Italian, French, Geography, Practical Chemistry, and Zoology.

RESIDENCE OF STUDENTS. Some of the Professors receive Students to reside with them. In the Office of the College there is kept a Register of persons who receive Boarders into their families. The Register will afford information as to the Terms and other particulars.

Information concerning ANDREWS' ENTRANCE EXHIBITIONS, Classics and Mathematics, three of £30, tenable for three years; ANDREWS' PRIZES, ANDREWS' SCHOLARSHIPS, JEWS' COMMEMORATION SCHOLARSHIP, DAVID RICARDO and JOSEPH HUME SCHOLARSHIPS in Political Economy, and JOSEPH HUME SCHOLARSHIP in Jurisprudence, and OTHER PRIZES, will be found in the Prospectuses and Calendar of the College. These may be had on application at the Office of the College.

AUGUSTUS DE MORGAN, Dean.

CHAS. C. ATKINSON, Secretary to the Council.

Sept., 1865.

MINERALOGY.—KING'S COLLEGE, LONDON.—PROFESSOR TENNANT, F.G.S., will deliver a COURSE of LECTURES on MINERALOGY, with a view to facilitate the Study of Geology and the Application of Mineral Substances in the Arts. The Lectures will commence on FRIDAY, OCTOBER 6, at 9 A.M., and will be continued on each succeeding Wednesday and Friday, at the same hour, until Christmas. Fee, 2s. 2d.

Another COURSE of LECTURES on MINERALOGY and GEOLOGY will be given on Wednesday Evenings, from 8 to 9. These begin OCTOBER 11, and will be continued until Easter, 1866. Fee, 1s. 11s. 6d.

R. W. JELF, D.D., Principal.

## BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

### BIRMINGHAM MEETING

Will Continue to the 17th instant.

RECEPTION ROOM, EXCHANGE ASSEMBLY ROOM, NEW STREET.

### PRESIDENT :—

JOHN PHILLIPS, Esq., M.A., LL.D., F.R.S., F.G.S., &c., &c., Professor of Geology in the University of Oxford.

The objects of the Association are: To give a stronger impulse and more systematic direction to scientific inquiry; to promote the intercourse of those who cultivate Science in different parts of the British Empire, with one another, and with Foreign Philosophers; to obtain a more general attention to the objects of Science and a removal of disadvantages of a public kind which impede its progress.

### GENERAL ARRANGEMENTS.

Wednesday, 6th September.—President's Address, delivered in the Town Hall.

Sectional Meetings daily, as usual, to the 12th inclusive.

Wednesday, 13th September.—Concluding General Meeting.

Thursday, 7th September.—Soirée in the Town Hall.

Friday, 8th September.—Evening Lecture in the Town Hall.

Monday, 11th September.—Evening Lecture and Soirée.

Tuesday, 12th September.—Soirée in the Town Hall.

Saturday, 9th September.—Excursions to Warwick, and Stratford-upon-Avon; Coventry and Kenilworth; Worcester and Malvern; and to Wroxeter, Shrewsbury, Wenlock, the Wrekin, and Coalbrookdale.

Thursday, 14th September.—Excursions to Dudley Caverns, the South Staffordshire Coal Fields and Ironworks; and to Lichfield, Walsall, Cannock Chase, and the Burton Breweries.

On and after August 7th, until September 2nd, Life Members who intend to be present at the Meeting may receive their Tickets by applying to the General Treasurer, and returning to him their Life Member's Invitation Circular; Annual Subscribers who wish to receive their Tickets must return their Invitation Circular, with £1 enclosed, to the General Treasurer, W. Spottiswoode, Esq., 59 Grosvenor Place, London, S.W.

The Executive Committee at Birmingham will elect New Members and Associates on the following conditions:—

1.—New Life Members for a composition of £10, which entitles them to receive gratuitously the Reports of the Association which may be published after the date of payment.

2.—New Annual Subscribers for a payment of £2 for the first year. These receive gratuitously the Reports for the year of their admission, and for every following year in which they continue to pay a Subscription of £1 without intermission.

III.—Associates for this Meeting only for a payment of £1. They are entitled to receive the Report of the Meeting at two-thirds of the publication price.

Ladies may become members on the same terms as Gentlemen. Ladies' Tickets (transferable to Ladies only) may be obtained by Members, on payment of £1.

Personal application for Tickets must be made at the Reception Room (the Exchange), Birmingham.

Gentlemen, who have, in any former year, been admitted Members of the Association, may on this occasion renew their Membership, without being called upon for arrears, on payment of £1.

Without a proper Ticket obtained as above, no Person will be admitted to any of its Meetings.

Members and Associates intending to be present at the Meeting are requested to apply to the Local Secretaries, No. 52 New Street, Birmingham, who will assist them in procuring Lodgings, and will forward a Railway Pass entitling the holder to obtain from the principal Railway Companies a Return Ticket at a Single Fare, available from Monday to Saturday inclusive.

G. D. BOYLE,  
J. H. CHAMBERLAIN,  
WM. MATHEWS, Jun., Local Secretaries for the Meeting.

UNIVERSITY HALL, 14, BROWNSWOOD PARK, STOKE NEWINGTON, N.—Principal, the REV. WILLIAM KIRKUS, LL.B.; assisted by experienced Masters in Natural Philosophy, Chemistry, and Modern or Eastern Languages. Gentlemen receive a thorough Education in all Branches, and the most careful special attention is paid to the Preparation of Candidates for University and Civil Service Examinations, and the Preliminary Arts Examinations for Law and Medical Students.—For all Particulars, apply to the Rev. W. KIRKUS, 14 Brownswood Park, Stoke Newington, London, N.—A limited number of Boarders can be received.

## Sales by Auction.

### NATURAL HISTORY.

MR. J. C. STEVENS will SELL by AUCTION, at his Great Rooms, 38 King Street, Covent Garden, on TUESDAY, SEPTEMBER 12, at Half-past Twelve precisely, a COLLECTION of HEADS and HORNS of ANIMALS, BIRD-SKINS, REPTILES in SPIRITS, INSECTS, SHELLS, MINERALS, FOSSILS, and sundry Curiosities.—On view the day prior and morning of Sale, and Catalogues had.

### CAMBERWELL.—VALUABLE FREEHOLD PROPERTY.

MR. ALEXANDER KIRKLAND will SELL by AUCTION, in separate Lots, at GARRAWAY'S, on WEDNESDAY, SEPTEMBER 13, at Twelve o'clock, FOURTEEN SEVEN-ROOMED HOUSES, behind Peckham Grove, and overlooking the Rosemary Branch Cricket Ground. They are substantially built (brick and slated), and have only been recently finished. They are all let to respectable tenants at £26 a-year, but worth £30.—May be viewed any day previous to the Sale, on application to the Auctioneer, at 3 Carey Street, Lincoln's Inn, W.C.

### ROYAL SCHOOL OF MINES.

DIRECTOR.

SIR RODERICK IMPEY MURCHISON, K.C.B., F.R.S., &c.

During the Session 1865-6, which will commence on the 2nd of OCTOBER, the following COURSES of LECTURES and PRACTICAL DEMONSTRATIONS will be given:—

- 1. Chemistry—By E. FRANKLAND, F.R.S., &c.
- 2. Metallurgy—By JOHN PERCY, M.D., F.R.S.
- 3. Natural History—By T. H. HUXLEY, F.R.S.
- 4. Mineralogy } By WASHINGTON W. SMITH, M.A., F.R.S.
- 5. Mining } By A. C. RAMSAY, F.R.S.
- 6. Geology—By ROBERT WILLIS, M.A., F.R.S.
- 7. Applied Mechanics—By JOHN TYNDALL, F.R.S.
- 8. Physics—By EDGAR, M.A.

Instruction in Mechanical Drawing, by Rev. J. HAYTHORNE

EDGAR, M.A.

The Fee for Students desirous of becoming Associates is £30 in one sum, on entrance, or two annual payments of £20, exclusive of the Laboratories.

Pupils are received in the Royal College of Chemistry (the Laboratory of the School), under the direction of Dr. Frankland, and in the Metallurgical Laboratory, under the direction of Dr. Percy.

Tickets to separate Courses of Lectures are issued at £3 and £4 each.

Officers in the Queen's Service, Her Majesty's Consuls, acting Mining Agents and Managers, may obtain tickets at reduced prices.

Certified Schoolmasters, Pupil Teachers, and others engaged in Education, are also admitted to the Lectures at reduced fees.

His Royal Highness the Prince of Wales has granted two Scholarships, and several others have also been established.

For a Prospectus and information, apply at the Museum of Practical Geology, Jermyn-street, London, S.W.

TRENTON REEKS, Registrar.

THE MUSEUM of PRACTICAL GEOLOGY, Jermyn Street, will be RE-OPENED on MONDAY, the 11th INST. Open free to the Public every day but Friday.

A MARRIED PHYSICIAN of great experience, residing in one of the Home Counties, twenty miles from London, wishes to receive into his house, a Lady mentally or nervously afflicted.

The house is pleasantly situated in its own garden grounds of three acres, on the outskirts of a village one and a-half miles from a Railway Station.—For terms, &c., apply by letter to BTA, Messrs. KINGSBURY & Co., 4 Birch Lane, Cornhill, London, E.C.

A THOROUGHLY EFFICIENT TEACHER of THEORETICAL and PRACTICAL CHEMISTRY is REQUIRED.—Address, M. W., care of JOHN RONSON, Esq., 42 Queen Square, Bloomsbury, London, W.C.

EDUCATION IN GERMANY, by DR. GASPEY, of HEIDELBERG. Prospectuses may be had of Mr. CAMPBELL, Argyll Chambers, Argyll Place, and Mr. CULVERWELL, 21 Norfolk Street.

SEARCH FOR A PUBLISHER.—The New Edition of this favourite work is now ready. It is greatly improved in appearance, and, among other embellishments, contains a specimen of the Photographic Illustrations used in A. W. Bennett's well-known works illustrated by Photography. A copy will be forwarded to any address on receipt of 12 postage stamps.

5 Bishopsgate Street Without, August, 1865

# THE READER.

9 SEPTEMBER, 1865.

## PUBLICATIONS OF THE ANTHROPOLOGICAL SOCIETY.

In 8vo, pp. 146, with 49 Woodcuts, price 7s. 6d. cloth,  
**LAKE HABITATIONS and PRE-HISTORIC REMAINS** in the TURBARIES and MARL BEDS of NORTHERN and CENTRAL ITALY. By BARTOLOMEO GASTALDI, Professor of Mineralogy in the College of Engineering at Turin. Translated from the Italian, and edited by CHARLES HAROURT CHAMBERS, M.A., F.R.G.S., F.A.S.L., &c.

*Recent Publications, in the same Series.*

**BLUMENBACH (J. F.)**, LIVES and ANTHROPOLOGICAL TREATISES of, including the *De Generis Humani Varietate Natura*, and the *Dissertatio Inauguralis* of Dr. John Hunter. Translated and Edited by T. BENDYSHE, Esq., M.A., V.P.A.S.L., Fellow of King's College, Cambridge. Pp. 420, price 16s.

**LECTURES on MAN; his Place in Creation and in the History of the Earth.** By Dr. CARL VOGT, Professor of Natural History in the University of Geneva, Foreign Associate of the Anthropological Society of Paris. Edited by JAMES HUNT, Ph.D., F.S.A., F.R.S.L., F.A.S.L., Honorary Foreign Secretary of the Royal Society of Literature of Great Britain, Foreign Associate of the Anthropological Society of Paris, and President of the Anthropological Society of London. Pp. 498, with 127 Woodcuts, price 16s.

**THE PLURALITY of the HUMAN RACE.** By GEORGES POUCHER, M.D., Licentiate of Nat. Science. Translated and Edited from the Second Edition by HUGH J. C. BEAVAN, Esq., F.R.G.S., F.A.S.L. of the Middle Temple, Barrister-at-Law. Pp. 172, price 7s. 6d.

**ON the PHENOMENA of HYBRIDITY in the GENUS HOMO.** By Dr. PAUL BROCA, Secrétaire Général à la Société d'Anthropologie de Paris. Edited by C. CARTER BLAKE, F.G.S., F.A.S.L. Pp. 134, price 5s.

**WAITZ'S INTRODUCTION to ANTHROPOLOGY.** Edited from the FIRST VOLUME of *Anthropologie der Naturvölker* by J. FREDERICK COLLINGWOOD, F.R.S.L., F.G.S., F.A.S.L., Foreign Associate of the Anthropological Society of Paris. Pp. 400, price 16s.

London: LONGMANS, GREEN, & CO., Paternoster Row.

Now ready, No. X., JULY, price 4s.; by post, 13s. 4d. Annually,

**THE ANTHROPOLOGICAL REVIEW, and JOURNAL of the ANTHROPOLOGICAL SOCIETY of LONDON.**

### CONTENTS:

1. PHILOSOPHY AND PSEUDO-PHILOSOPHY.
2. DIEFENBACH ON ETHNOGRAPHY AND CIVILIZATION.
3. BUNSEN ON BIBLICAL ETHNOGRAPHY.
4. DUTCH ANTHROPOLOGY.
5. MAN AND THE WORLD.
6. ON THE RECOGNITION OF ANTHROPOLOGY AT THE BRITISH ASSOCIATION.
7. MISCELLANEA ANTHROPOLOGICA.

The JOURNAL OF THE ANTHROPOLOGICAL SOCIETY OF LONDON contains: U. T. Pritchard on the Physical and Psychological Character of the Viti Islanders—Anderson on Human Remains from Wick—Winwood Reade, H. B. Owen, and the Lord Bishop of Natal on the Efforts of Missionaries among Savages.

London: TRÜBNER & CO., 60 Paternoster Row.

## LINNEAN SOCIETY.

This day is published, price 4s.

**ON the MOVEMENTS and HABITS of CLIMBING PLANTS.** By CHARLES DARWIN, Esq., F.R.S. and L.S.

Sold at the Society's Apartments, Burlington House; and by LONGMANS, GREEN, & CO., Paternoster Row; and WILLIAMS & NORGATE, Henrietta Street, Covent Garden.

## ZOOLOGICAL SOCIETY'S LATEST PUBLICATIONS.

**PROCEEDINGS OF THE SOCIETY FOR 1864.** 1 Vol., cloth. With Plates, price 2l. 7s.; without Plates, 6s.

**INDEX TO THE PROCEEDINGS OF THE ZOOLOGICAL SOCIETY from 1848 to 1860.** Price 6s.

**TRANSACTIONS OF THE SOCIETY.** VOL. V., PART IV., containing Papers by

PROFESSOR OWEN, F.R.S., on the "NATURAL HISTORY of the ANTHROPOID APES" (with Seven Plates);

PROFESSOR ROLLESTON, F.R.S., on the "PLACENTAL STRUCTURES of the TENREC, and those of certain other MAMMALIA," with Remarks on the Value of the Placental System of Classification (with One Plate);

PROFESSOR OWEN, F.R.S., "DESCRIPTION of the SKELETON of the GREAT AUK, or GARE FOWL" (with Two Plates). Price 30s.

**LIST OF VERTEBRATED ANIMALS LIVING in the GARDENS of the ZOOLOGICAL SOCIETY of LONDON.** Third Edition. Price 1s. 6d.

These may be obtained at the Society's Office, 11 Hanover Square, W.; at Messrs. LONGMANS, GREEN, & CO.'S, Paternoster Row; at Mr. J. ROTHSCHILD'S, 48 Rue Saint André des Arts, Paris, and 34 Queerstrasse, Leipzig; or through any Bookseller.

\* The Subscription Price of the Society's Publications, in the case of Fellows and Corresponding Members of the Society, is now reduced to the sum of 1s. 6s. per Annum, provided such Subscription be paid in advance before the 29th of April in each year.

"One of the most real, interesting, and instructive pieces of religious Biography of the present day."

NOW READY, complete in 2 Vols., post 8vo, with Portrait and Illustrations, price 21s.

TO BE OBTAINED AT ALL THE LIBRARIES.

## THE LIFE OF DR. BEECHER.

AN AUTOBIOGRAPHY.

EDITED BY HIS SON.

With Illustrations.

"We have waited for the publication of the second and last volume of this interesting, we may well say entertaining, biography, before introducing it to our readers. It is now complete, and furnishes one of the most various and delightful portraits of a fine, sturdy, old representative of ancient theology and earnest piety, relieved by very sweet and engaging pictures of New England society in its religious circles, and the ways and usages of the men and women who lived, and loved, and married, and had families, nearly a century since. . . . And now we must lay down these very delightful volumes. We trust we have sufficiently characterized them, while there are, of course, reminiscences, pictures of places and of persons, we have been unable even to mention. It was an extraordinary family altogether; a glow of bright, affectionate interest suffuses all in charming sunshine. It was a life of singular purpose, usefulness, and determination; and we think ministers especially, and of ministers young students especially, might read it, and read it more than once, to advantage. . . . Without attempting any more words, we hope we have sufficiently indicated our very high appreciation of, and gratitude for, this charming and many-sided biography of a most robust and healthy life."—*The Eclectic*.

"All that the old man writes is clever and sagacious."—*Athenaeum*.

"If the reader can imagine the Vicar of Wakefield in America, this memoir will give a very good idea of what he would be among Yankee surroundings. There is the same purity, sincerity, and goodness of heart, the same simplicity of manners and directness of purpose in Dr. Primrose and Dr. Beecher, though the go-ahead society in which the latter divine lived failed not to impress its character upon him. This is an instructive and charming book for family reading as can be taken up for that purpose."—*Daily News*.

"There has been no American divine deceased of late years, the history of whose life and character is likely to prove more attractive on this side of the Atlantic."—*Star*.

"A hundred pleasant things we must pass by; but readers of these charming volumes will not do so."—*Wesleyan Times*.

"By this happy combination of a sound mind with a sound body, of grace with exercise—or, as he himself pithily puts it, 'by prayer and regimen'—Dr. Beecher's life was prolonged, with hardly an ailment of body or a depression of spirit, till it closed, in his eighty-eighth year, on the 10th of January, 1863. His biography, chiefly drawn up in his own vigorous and homely language, is full of those touches which bespeak an original, hearty, and rigorously upright nature; uncouth, it is true, and lacking in the higher points of cultivation and refinement, yet winning upon us, in its honest and unaffected roughness."—*Saturday Review*.

"Mr. Beecher, who has just issued the second and concluding portion of his father's Life, is entitled to the credit of having produced one of the most real, interesting, and instructive pieces of religious biography of the present day. He had undoubtedly a good subject, and it is to his honour that in the main he has known how to treat it well. . . . We cannot follow him into the retirement of his green old age, nor will our space allow us to gather up those anecdotes illustrative of his character with which this work abounds, and which form one of its principal charms. We regret this the less because we hope there are few of our readers who will not themselves read the book and make the acquaintance of the large-hearted and noble-minded man, whose long and useful life has left so deep and healthful an influence alike on American theology and politics."—*Nonconformist*.

"He was a true-hearted man, a good and brave soldier of Jesus Christ, and a minister to whose labours the American Churches may look back with thankfulness and pride."—*Family Treasury*.

London : SAMPSON LOW, SON, & MARSTON,  
Milton House, Ludgate Hill.

## NEW BOOKS FOR CHILDREN (Large Type).

1. **THE LITTLE DOORKEEPER.** By the Author of "Waggie and Wattie." Large 16mo, four Engravings, 3s. 6d., cloth.

2. **LITTLE LILLA ; or, The Way to be Happy.** Large 16mo, large type, Engravings, 3s. 6d.

3. **THE DOVE, and OTHER STORIES of OLD.** In 16mo, eight Engravings, large type, 2s. ed.

4. **GREAT THINGS DONE by LITTLE PEOPLE.** In 16mo, six Engravings, large type, 2s. 6d.

5. **THE LITTLE FOX ; or, Captain McClinton's Expedition.** 16mo, Engravings, large type, 2s. 6d.

6. **LITTLE ANIMALS DESCRIBED for LITTLE PEOPLE.** 16mo, large type, eight Engravings, 2s. 6d.

7. **LITTLE FACTS for LITTLE PEOPLE.** By the Author of "Waggie and Wattie." Twelve Engravings, 2s. 6d.

8. **TRUE STORIES for LITTLE PEOPLE.** In 16mo, large type, ten Engravings, 2s. 6d.

"A series of books for little people which does credit to its publishers."—*Guardian*.

SEELEY, JACKSON, & HALLIDAY, 54 Fleet Street, London.

## WORKS BY MRS. MARSHALL.

**BROOK SILVERTONE and the LOST LILIES:** Two Stories for Children. With fourteen Engravings, 3s. 6d. cloth.

**HELEN'S DIARY ; or, Thirty Years Ago.** Second Edition. 5s., cloth.

**BROTHERS and SISTERS ; or, True of Heart.** Second Edition. 5s., cloth.

**LESSONS of LOVE ; or, Aunt Bertha's Visit.** Second Edition. 3s. 6d. cloth.

SEELEY, JACKSON, & HALLIDAY, 54 Fleet Street, London.

8vo, cloth, with 156 Woodcuts and Three Plates, 15s.

## PREHISTORIC TIMES,

As Illustrated by Ancient Remains, and the Manners and Customs of Modern Savages.

BY SIR JOHN LUBBOCK, BART., F.R.S., President of the Ethnological Society, Vice-President Linn. Soc., &c., &c.

"It teems with information on everything that has yet been discovered bearing on the early history of our race, and is written in so clear and agreeable a manner, that it is sure both to gratify and instruct every class of readers."—*Reader*, June 24.

"Those who desire a compact and careful review of the whole subject, well illustrated, will find it in this volume."—*Athenaeum*, June 24.

"A work of more than usual interest, in which Mr. Lubbock has dealt with a very difficult subject in the most scientific, but at the same time in the most alluring manner."—*Times*, June 6.

"There is not an idle page in the volume, nor one that can be skipped. . . . We can speak of the value of the work as a whole, with unqualified praise. . . . He has studied the whole subject with unwearied patience, and devoted to it many years and many talents."—*Standard*, August 3.

HUXLEY AND HAWKINS'S ATLAS OF OSTEOLOGY.

Price 25s., folio, bound in cloth.

## AN ELEMENTARY ATLAS OF COMPARATIVE OSTEOLOGY.

Consisting of Twelve Plates, in Folio. The Figures selected and arranged by

Professor T. H. HUXLEY, F.R.S.,

And Drawn on Stone by B. WATERHOUSE HAWKINS, F.L.S.

Third Thousand, 8vo, cloth, with 35 Woodcut Illustrations, price 6s.

## EVIDENCE AS TO MAN'S PLACE IN NATURE:

Or, Essays upon—1. The Natural History of the Man-like Apes.—2. The Relation of Man to the Lower Animals.—3. Fossil Remains of Man.

By T. H. HUXLEY, F.R.S.

Fourth Edition, price 10s. 6d., 8vo, cloth boards.

## THE SAILOR'S HORN-BOOK FOR THE LAW OF STORMS:

A Practical Exposition of the Theory of the LAW OF STORMS, and its Uses to Mariners in all parts of the World, shown by Transparent Storm Cards and Useful Lessons.

With Charts and Diagrams.

By HENRY PIDDINGTON, Late President of Marine Courts, Calcutta. Fourth Edition, enlarged and improved.

By the same Author, price 7s., 8vo.

## CONVERSATIONS ABOUT HURRICANES,

FOR THE USE OF PLAIN SAILORS.

WILLIAMS & NORGATE, 14 Henrietta Street, Covent Garden, London; and 20 South Frederick Street, Edinburgh.

## THE READER.

SATURDAY, SEPTEMBER 9, 1865.

### SIMEON AND SIMONY.

IT is rather unfortunate, if true, that the very earliest essentially Christian sin should also be one which the Catholic Church has never been able wholly to extinguish. But it was news to us, until Mr. Willis made out the genealogy, that the Samaritan relative of St. Peter managed to propagate his issue in this country until the race culminated in the person of Charles Simeon, who did his best to secure in perpetuity the memory of the family-failing or disease called Simony. Magus was not covetous but ambitious. Simeon did not so much seek income as spheres. Magus asked for the power of laying on hands. Simeon, wiser in his generation, not only offered the price, but bought the power of deciding on whom hands should be laid. Magus evidently thought he could do anything he saw the Apostles do. Simeon was strongly impressed with the idea that the Word could be preached by no other person so well as himself; or as another learned divine lately declared, that he could teach with a clearness and fidelity unsurpassable by living man. Mr. Willis laments that Simeon never acknowledged his relationship to the most distinguished member of his family. But, at all events, he was so far well versed in his history, that he took care by a very practical method to avoid the fate which befel his ancestor, and to elude the effect of the apostolical hope or prayer, "that his money might perish with him;" for he wisely vested it in trustees, who continue to exercise the powers obtained even to the present day. But would the apostolical adversary have been satisfied with such an arrangement? Would the power of nominating a few obscure priests, or even a Bishop, have been any object to him? Would that have been a good investment of Samaritan capital? If he had been as persevering as his Evangelical descendant, we might perhaps have been able to form some idea on that point; but his modesty was too great. He retreated within himself, without the most distant notion that, wherever the Gospel was preached, this story would always be told as a memorial of him. Simon Magus was undoubtedly wrong. The Apostles were not to be bribed. They were already accustomed to find persons giving up their whole fortunes, without asking anything in return. They demanded all, or nothing. To have fixed a price would have been instant ruin to their pretensions. But what if Simon had gone somewhat more craftily to work? What if he had erected the first humble Christian church in some little Samaritan village? What if he had endowed it, as could be done even in those days? What if he had married only one respectable woman, instead of the gay Helena, who subsequently scandalized all Rome? What if he had never struck anyone, or been accused of breaking the peace? What if he had managed his own affairs so that everyone spoke well of him? Would the Apostles then have used the same language? All externals being in his favour, all prescribed ceremonies having been complied with, would they have considered land and tithes as "the accursed thing?" Would they have refused to unite

Magus and the Church with the Episcopal ring, because he bestowed a noble dower on the bride? Temptation did not, however, present itself in such a form. Satan was not so cunning as he became subsequently. Spiritual principalities in high places had no experience. It would have been more satisfactory to patrons and Lord Chancellors to have had the Apostolical opinion on the subject of presentations. But there is only one alternative. We must blame the remissness of our Great Enemy, or we must conclude that he perceived there would be no sin in such a bargain, and did not wish to suggest a mode by which property might be conveyed to the opposite interest. What was called, indeed, Simony, when first denounced, evidently involved a loss to the Church. The money which should have gone to the common purse went into the pockets of the accommodating Bishop, or to buy the sweet voices of the early Christians. The first Council forbade fees for baptism as well as for ordination. The new convert would have been impoverished for the benefit of one alone.

Genuine Simony has perhaps no existence in these days. No one suspects a Bishop of actually receiving money for the laying on of hands, and Lord Westbury did not procure the resignation of even a single see. Is there really any other kind of Simony? Can the purchase of the power of presenting none but a fit person be so called? Let benefices remain in the hands of those who furnish the original endowment, and of their direct successors, say some. But such a trust, once sold is for ever afterwards accursed both to him that gives, and him that takes. Patron and priest alike are evil. There is but one thing for them to do. Restore it, like a stolen horse, to the original owner. If this is really so, there is an end of the matter. Such a *reductio ad absurdum*, if true, proves more than any other argument. The narrow end of the "wedge of gold" will be found in every tent. There is but one thing left for the Church. She must dismantle herself of all possessions, and restore them to her faithful laity, with the full intention of performing her part, if necessary, without gift or reward. She must begin the world again, or literally perish with her money.

It is somewhat suspicious that modern Simony is first traced to the Arians. This sect was always practical and sensible. Still whatever they had done was naturally condemned. But there is so much equity in the practice of allowing the owner of what is to all intents and purposes private property to sell it in the market, that the traffic in advowsons has never been actually prevented in any country. But the efforts to stop the traffic in advowsons that they began were as ineffectual as those to stop lending money on interest. The denunciations of one practice have been as powerful as those levelled against the other. The Church, it is true, has condemned both. But is the Church infallible? Scripture is more decidedly against usury than pseudo-simony. But usury has no longer an existence; its name has survived the thing—a standing memorial of the folly of past ages.

Yet usury has been classed in its day with murder and robbery. Harsher names could scarcely be found to express the guilt even of Simony. Usury made easy would have shocked St. Thomas Aquinas scarcely less than "Simony made easy,"

as the Royal Commissioners propose, appears to outrage Mr. Willis. The seraphic doctor could, however, distinguish between lending a horse and lending the use of it. It was lawful to pay something for the latter, though execrable to pay for the use of the purchase-money. Cannot the ecclesiastical casuist allow a similar refinement for the tender consciences of incumbents? The Commissioners are clearly ready to go as far as they dare. They would tone down the oath into a declaration; they would allow the declarant to form his own opinion of what is simoniaca. But Mr. Willis cruelly reminds them that St. Paul took an oath entirely of his own accord against profiting by his ministry. That oath, however, was purely retrospective. An oath to be taken only on the avoidance of a benefice would not have many terrors for the most conscientious presentee. Mr. Willis is no respecter of persons. The "Defender of the Faith" has, through the keeper of her conscience, put up three hundred livings for sale. Let them both, the Reverend Prebendary cries out, be declared not only to be Pirates, but be dealt with as such. Thus only can the Lord Chancellor be prevented from running "the middle passage," and smuggling the black-coated gentry into the haven where they would be. Lord Westbury was always proud, we believe, of having stood so far in the place of an apostle as to abolish eternal punishment. The notion of having administered, unwittingly, the gift of Holy Orders to three hundred aspirants at once, would have been, probably, not less gratifying to his love of spiritual supremacy. But is there any one who really considers the presentation to a living as equivalent to the ceremony of ordination? If so, why is that ceremony retained? or, at all events, why does the induction into the temporalities follow instead of preceding the consent of the bishop? To take an illustration from the armoury of Aquinas: I may give you a horse, but cannot give you the art of riding on it.

The elective franchise is another case in point. A man's 10*l.* house in a borough entitles him to a vote. He may dispose of his house, and thereby convey the vote. He may have twenty such houses, and so create twenty fresh voters. But is he thereby guilty of bribery? The franchise is the result of many qualifications uniting in one person. The law of the land, the power of purchasing, proper age, and other requisites, must all be combined. So with advowsons. The purchase of the temporalities is only one element. Misplaced views of Scripture have made it the most prominent. But whilst true Simony has long since died out, pseudo-simony has become at last all but legalized. The value of advowsons is somewhat diminished by reason of the shifts necessary to transfer them. The morals of the clergy are somewhat under a cloud, because the law does not recognize the market in which they principally deal. But no considerations can stop traffic in goods whose value can be calculated and whose possession is certain. The mere gift of Holy Orders cannot be appreciated in money. The first bargainer knew neither the nature nor the worth of what he wanted. It was a genuine speculation. Sin or not, it was certainly a blunder. Simon would have been at best but a roving parson, and

# THE READER.

9 SEPTEMBER, 1865.

would probably have soon declared that the Apostles had been too clever for him. Land and houses, rent and tithes, will be bought and sold as long as the world endures. Influence, both spiritual and temporal, must pass with them, despite the canons of all the Councils. Functions must pass with them also. Titles of honour have indeed been dissevered from actual localities by public policy. But that was not till they ceased to be of local importance, and came to denote merely the station of the possessor. The exact opposite has taken place with spiritualities. The regular clergy are gone. The irregulars are the only ones we recognize. To fix them to their duties they must have distinct limits. The right to practice is one thing; the right to exclusive practice within a district is another. If a man is to live by his altar, he must not be subject to competition. The price of spiritual food per head is low. The pagan priest could only get possession by slaughtering his predecessor; but he did not deny the fact, and the mode of tenure was much respected. We have substituted the milder form of buying people out. Why should our clergy blush to allow the superiority of the Christian method? Why get rid of one crime merely to create another? Let the traffic in temporalities be as free in law as it is in fact. Our sins will be fewer, and our priests none the worse.

## CURRENT LITERATURE.

### SIR RICHARD STEELE, KNT.

*Sir Richard Steele, Memoirs of the Life and Writings of.* By H. R. Montgomery. (Nimmo.)

STEELE and his coadjutor, Addison, are usually classed together to be compared, and are seldom compared without being classed. Each of these writers has his advocates and partisans, among whom are to be numbered well-known authors, some favouring Addison to the disadvantage of Steele, and some depreciating Steele and obscuring his reputation for the sake of glorifying Addison. Thackeray and Lord Macaulay are the most eminent who have declared in favour of the Right honourable gentleman; while, on the other hand, Coleridge, Hazlitt, Leigh Hunt, Charles Lamb, and, more recently, Mr. Forster, seem to incline to the side of the knight. The present author, who thinks, and thinks justly, that Thackeray, in his "Esmond," has caricatured him, and, "for the sake of being graphic and dramatic," has given the reader the general impression of his being a sort of Captain Costigan, is the latest apologist and advocate of Steele. His work is an attempt to reproduce the age of Queen Anne "through the medium of a life of Steele." The animus is undoubtedly good; but we fear the attempt must be considered unsuccessful, inasmuch as it has resulted in very unsatisfactory performance. It will furnish those who are altogether unacquainted with the history of England and its literature during the period treated with a large number of facts relating to eminent persons and great affairs which cannot fail to be of value. But to the student of the period—to him who is already familiar with so important and critical a period in our annals as the reign of Queen Anne—it can have but the slightest interest. He will find in its pages nothing that will be new to him; and what is old will lose all interest, from the inefficient treatment it has received. After reading the seven hundred pages which form the two volumes, he will not have so distinct a notion of Steele or any of his contemporaries as he now possesses of the fictitious De Coverley from the few papers devoted to that hero in *The Spectator*. The work is a made-up work. As a whole it

is sadly deficient in unity. Not only have we biographies of the persons who wrote for the several publications with which Steele was connected—"a group of sketches around the central figure"—but, "in accordance with the expressed aim of the design," we are presented with sketches of those to whom the several volumes of the works were dedicated. Nor is there the least art displayed in the grouping or presentment of the figures that pass before us. The people who are introduced are introduced on the slightest pretext. A casual allusion to a name, or its occurrence in correspondence, will evoke its former owner and trot him through a dozen pages. The author has failed to give us an intelligible picture of the age, but instead thereof offers disconnected memoirs and world-famous anecdotes. We have the old story of the loves of the great Dean, and are told, in the words often employed before, how one day Swift, entering the room where Vanessa was sitting, "with that terrible look which he assumed when angry, flung down a packet on the table and strode out without uttering a word;" how that when "Gulliver's Travels" appeared a master of a vessel said "he knew Gulliver well, but that he lived at Wapping, and not at Rotherhithe;" how King William taught the famous Irish parson to cut asparagus. Once again, we read in these volumes the fate of the unfortunate Budgell, and have Pope's stinging lines on the event; of the quarrel between Pope and Lady Mary Wortley Montagu; of how Wycherley made acquaintance with the Duchess of Cleveland, and of his marriage with the Countess of Drogheda; of Congreve's friendship with the Duchess of Marlborough, and the fantastic way in which her Grace, after the death of the poet, is said to have preserved his memory by inviting to her table, as a constant guest, "an automaton model of him in ivory," and of scores of similar stories, as well known to ordinary readers as the Nelson Column to the porter at Northumberland House. The author's insight into character may be learned from the expression of his belief that when Steele left the University without a degree, and enlisted in the Horse Guards, "great admiration of the character of King William had something to do with it;" and his taste from the regret he avows that Steele was not equally wise in his generation with "the Reverend Dr. Swift, who had gone such lengths in doing the foul work of party, to earn the wages of mercenary apostacy." Our author may be right; but surely Mr. Henry R. Montgomery, in his playful irony, is here doing in the case of Swift what he complains of others doing in the case of Steele.

In addition to the fundamental faults we have indicated, the work contains minor defects too numerous to be mentioned. The transmigration of souls from body to body is generally called "metempsychosis," and not "metempsachosis," as it is sometimes pronounced and is here spelt. Law students of the Inner or Middle Temple generally spell themselves "Templars," and not "Templers," as they are more than once styled by Mr. Montgomery. How anything can be "a striking example of the *Montes parturiunt, &c.*," is as much a subject of wonder to us as to hear from our author that Dr. Wilde, who, we believe, is still alive in Dublin, could have sent a communication to *The Gentleman's Magazine* in 1757.

Incorporated with the text, however, and by far the most valuable portion of the work, are the letters reprinted from "Steele's Correspondence," published in 1809 by Nichols from the originals in the British Museum. Some of these are addressed to Swift, Pope, and other literary friends; but by far the greater number are to Lady Steele. They are the shortest epistles in existence, and all of a character. The writer was always in a hurry, and always excusing his delay in returning home. "The coach is passing, and I can say no more;" "I am drinking a pint of wine, and will come home forthwith;" "I put myself to the pain of absence from you at dinner by waiting to speak to Salkeild;" "I have

received money, but cannot come home till about four o'clock"—such is the tenor of them all. We suspect, however, from numerous indications, that it was not always solicitude for his wife and fear of her prolonged anxiety that induced him to write so frequently. We fear Lady Steele was in the habit, like a foolish wife, of seeking her husband when in company. More than once he writes, "Do not send after me; I shall be ridiculous," and he complains that he must always be giving her an account of every minute of his time. His eternal want of money was a great misery to him, and, to judge from these letters, we cannot help thinking, in opposition to most men, that a seemingly cheerful demeanour frequently concealed trouble and dimness of anguish. When his wife went to Carmarthen, to her native place, leaving him in charge of the daughter afflicted with smallpox, he writes: "We had not when you left us an inch of candle, a pound of coal, or a bit of meat left in the house; but we do not want now." And she, with her Welsh ways, and her Welsh advisers, was perpetually worldly-ing, complaining of what he owed her, and urging him to get money. His little notes are a series of promises to mend his means. He, poor fellow, felt the reproach keenly. "I do as you advise," he says; "court and converse with men able and willing to serve me;" and, again, upon being reminded by her of the ingratitude he had experienced: "I have as quick sense of the ill-treatment I have received as is consistent with keeping up my own spirit and good humour." He reproached her at first by innuendo; but once or twice fairly lost temper, and wrote in a rage. "In the name of God," he exclaims, "have done with talk of money!" But his rage was of short duration, and in his next note he was on his knees, a doating husband, writing to his wife to put on her mask and come to Somerset stairs, or desiring her to take a coach and "come to this lodgings," or taking such interest in her appearance as to request her to "look a little dressed, or everybody will be entertained but the entertained." He was ever most sanguine, and had, withal, a knack of hoping rarely equalled. He tells his wife, in one letter, that she, her servants, and children, shall be better provided for than any family in England; and in another—in high spirits at the anticipated success of a scheme for bringing live fish to the London market—that he hoped in "a post or two to give an account of a thing that will bring a great sum of money." "I shall soon be a clear man," and "I am in a fair way to be a great man," was the burden of his daily song.

To institute comparison between famous personages is a favourite employment as well with impulsive critics as with the general public. The comparisons are in most instances as puerile as would be a discussion of the question whether a potato or a pine-apple is the better fruit. Each fruit is good in its way, and for the advocate of the one to dispute the claims of the other would manifestly be absurd. So with what are termed "great men." Accurate thinkers know no such phenomenon as a great man. They regard each man as good of his sort, and with them, therefore, there could arise no dispute as to whether, for instance, Shakespeare or Napoleon was the greater man; they content themselves with crediting the one with being a great general, and the other a great dramatist. English readers, however, and intelligent English writers, are not satisfied with this. They pit one man against another, with whom, in reality, he has no points of similarity, or if he has, they are due to circumstance, and not to nature. For this reason Steele, who, as we have said, is usually contrasted with Addison, has suffered great injustice.

The majority of readers and writers find it difficult to conceive a "great" man made of such stuff as he. They look for strong character in their heroes; and this disposition influences the idea they form of a man's writings. Dignity of attitude, gravity of countenance, and, in some degree, conformity

# THE READER.

9 SEPTEMBER, 1865.

between opinion and action, are indispensable for securing their applause. Like Hermotimus, an interlocutor in one of Lucian's Dialogues," who became a convert to the Stoic philosophy solely because he observed its professors were serious in demeanour, they regard levity in manner as indicative of shallowness in intellect. It is not surprising, then, that Steele, whose career was a solecism in morals, does not obtain the praise he merits. From the time of his leaving college without a degree, to the day of his death on the banks of the Towy, at the age of 58, an old man before his time, he was the victim of his own temperament. He was genial, good-natured, fond of good society, and, to use the words of Lady Mary W. Montagu, like Fielding, so made for happiness, that it is a pity he was not immortal. But happiness, we fear, never came. Even in affairs of the heart, in which, as might be supposed, he had his share, he does not seem to have prospered. The "perverse" widow (widows, as De Coverley and more of us have experienced, are too often "perverse") left a wound in his heart that, we suspect, was never quite healed. Indeed, as soldier, lover, pamphleteer, gazetteer, Parliament man, patentee, inventor of fish machines, and father of a family, poor Sir Richard failed to reach the personal success he promised himself. But to abstract the author from the man—and, logically, this is the only way to judge him whose sole claim to notice is a literary claim—Steele must take high rank as an English man of letters. Neither he nor Addison were, it is true, men of the highest culture. Neither took a commanding view of literature or life. Both were inferior in range to Swift, whose vision, blurred and bleared as it was, included humanity itself, whilst their horizon was very contracted, the aim of both being avowedly to satirize the conventions by which they were surrounded, and to frame characters of domestic life. For his share in the work, Addison—partly from grace of style, and partly, no doubt, by reason of his greater specific gravity—has undoubtedly secured the larger share of credit. But the praise of Steele is far higher. He was one of those whose writings are greater than the writers. He planted a seed of revolution in our literature, thereafter, as we all know, to bear abundant fruit. "Bickerstaff" must be credited with the honour due to an inventor. He gave a new form to our literature; or, as it is quaintly put by one of his contemporaries, "his writings have set all our wits and men of letters upon a new way of thinking." T. P.

## THE GREEN KNIGHT.

*Sir Gawayne and the Green Knight*: an Alliterative Romance-Poem. Re-edited by Richard Morris.

*Lancelot of the Laik*: a Scottish Metrical Romance. Re-edited by the Rev. W. W. Skeat, M.A. (London : Published for the Early English Text Society by Trübner & Co.)

ENGLAND'S great legendary king still sleeps in the Vale of Avalon, and the prophecy that he should rise again is still unfulfilled—unfulfilled in the literal sense, but fulfilled surely in a better sense; and we, as has been said, may exclaim, "Arthur is come again." Yes, Arthur is come again; not for knightly deeds of love and war, not for the tournament, not for the feasting of the Round Table—these have passed away; but Arthur is come again, in that all our literature relating to him and his company of knights is being diligently sought after, and placed before us in all its freshness, with all its charms. And one who passed from us ere his tale of years was half told did much to bring about this revival of a neglected part of our early romance; but, unfinished, his work was left to other hands, and well are they carrying it on. We have recently had "Arthur" and "Le Morte Arthur," by Mr. Furnivall, the latter containing an "Essay on Arthur" by the gentleman above referred to; and now we have the adventures of two of Arthur's knights, Sir Gawayne,

the brave and the good, and Lancelot, better known for his intrigues with Guenevere.

It is not surprising that the unknown poet to whom we are indebted for the Alliterative Poems published last year by the Early English Text Society, should have chosen the exploits of Gawayne as the subject of one of his poems. A man of austere piety, holding in abhorrence all impurity, he saw in Gawayne his ideal of what a knight should be—fearless, courteous, pure. In the poem under notice we find a series of marvellous adventures, a strange compound of the true and the untrue, the probable and the improbable, the human and the superhuman. Often perplexed by the strangeness of the allusions to places, the reader is more often charmed by rare glimpses of early life and manners, and by the vigour of the language employed and the poetic talent displayed.

After the Siege of Troy, Romulus built Rome, and Felix Brutus founded Britain—

Where werre, and wrake, and wonder,  
Bi sythes hatz wont ther-inne,  
& oft bothe blysse and blunder  
Ful skete hatz skyfted synne.

—a description of our country which has been applicable many times since. Arthur lay at Camelot with all his knights, and many lovely ladies, and for fifteen days they kept their Christmas feast. The New Year was celebrated with great rejoicing; "the ladies laughed full loud, though they had lost their gifts, and he that won was not wroth;" and after they had washed, all sat down to eat. But a strange humour possessed Arthur; he would not eat nor would he sit long until he had witnessed an adventure of some kind. The preparations for eating and drinking went on merrily enough notwithstanding—

Each two had dishes twelve,  
Good beer and bright wine both;

there was no lack of anything. Hardly had the first course begun, when there rushed in at the hall door a knight clothed in green, and mounted on a green foal. His like had never been seen before; he carried neither spear nor shield; but in one hand he held a holly bough, in the other an axe, the edge of which was as keen as a razor. All were surprised at his appearance, and all were silent; some from fear, some from courtesy. Arthur, after a pause, saluted the knight, bade him welcome, and invited him to tarry awhile with them. But the stranger could not stay; he only sought the most valiant knight to prove him, but in Arthur's Court were only beardless children, who were no match for him. His challenge was to receive a stroke from any one, on condition that that one should receive a stroke from him—

& set gif hym respite,  
A twelmonyth & a day.

Fear again kept Arthur's men silent; and well it might, for—

The knight on his steed him fixed in his saddle,  
And fiercely his red eyes he rolled about,  
Bent his bristly brows, shining green,  
Waved his beard for to see whoso would rise.

When none would answer him, he demanded whether that were Arthur's Court, and taunted his hearers with the remark that the revel and renown of the Round Table were "overturned with a word of one man's speech." Arthur, blushing for shame, seized his axe and thought to strike. Undismayed—

The stiff man him before stood upon height,  
Higher than any in the house by the head and  
more.

With stern cheer there he stood, he stroked his  
beard,  
And with a countenance dry he drew down his  
coat,  
No more discouraged nor dismayed for his strong  
blows

Than any man upon the bench had brought him  
to drink of wine.

At this point Gawayne interferes, and asks that the "melly" may be his. Arthur consents, and gives Gawayne his weapon, telling him to keep heart and hand steady. The Green Knight was quite willing to receive the blow

from him, and, putting his "long, lovely locks" aside, he bared his neck for the stroke. It was given, and the knight's head rolled on the floor. The knight himself "neither faltered nor fell," but rushing forward seized his head, and then mounted his steed. Before leaving the room he warned Gawayne to meet him on New Year's morn to receive a blow in return. Arthur, having seen the marvel, could now eat. In eating and feasting ended the day, and with it ends "fyte the first."

We cannot follow Gawayne through the remaining "fyttes" of the poem; it must be sufficient to say that he encountered many hardships, and resisted many temptations; that at length he found the Green Knight, and submitted to receive a blow from him. When the "grim tool" was descending Gawayne "shrank a little with his shoulders," and was reproved.

Quoth G.: "I schunt onez,  
& so wyl I no more,  
Bot thaz my hede falle on the stonez,  
I con not hit restore."

The axe only pierced his skin, and he returned in safety to Arthur.

We give one extract as a specimen of the author's style, and of the language employed:—

After the sesoun of somer wyth the soft wyndez,  
Quen zeferus syflez hym-self on sedeze & erbez,  
Wela-wynne is the wort that woxes ther-oute,  
When the donkande dewe dropez of the leuez,  
To bide a blysful blusch of the bryzt sunne.  
Bot then hyzes heruest, & hardenes hym sone,  
Warnez hym for the wynter to wax ful rype;  
He dryuez wyth drozt the dust for to ryse:  
Fro the face of the folde to flyze ful hyze:  
Wrothe wynde of the welkyn wrasteleter with the  
sunne,  
The leuez lancen fro the lynde, & lyten on the  
grounde,  
& al grayes the gres, that grene watz ere;  
Thenne al rypez & rotez that ros vpon fyrt,  
& thus zirnez the zere in zisterdayez mony,  
& wynter wyndez azayn, as the worlde askes  
no sage.

Til mezel-mas mone,  
Watz cumen wyth wynter wage;  
Then thenkkez Gawan ful sone,  
Of his anious uyage.

The reader need not be dismayed at the strangeness of the language, because there is an admirable glossary at the end, which gives all that can be desired. We venture to make one suggestion to the editor. On page 14 we read—

Steppes in to stel bawe & strydes aloft.

The word "bawe" is glossed "bow of a saddle," with a (?). But why not read the line—

Steps into steel-bow and strides aloft,  
making "steel-bow" equal to *stirrup*?

The mere fact of the poem being re-edited by so accomplished an Early English scholar as Mr. Morris, is quite sufficient to satisfy all who know him through his former editions that it is done in the best possible manner. No praise of ours could add to the esteem in which he is held for extreme accuracy and a thorough mastery of his work.

The date of "Sir Gawayne" is placed as far back as 1320-30; "Sir Lancelot" comes two hundred and fifty years later. This difference in age would make a vast difference in the language employed, were the poems of the same dialect; but this is not the case. The former is written in the "West-Midland" dialect; the latter is Scotch, and as such presents little difficulty to the reader. Of course the spelling seems monstrous to an Englishman, but the words are easily recognized in their North Country dress. Take this passage, selected at random, to illustrate our meaning:—

. . . The woice [of the oppressed] It skriketh vp  
ful ewyne  
With-out abaid, and passith to the hewyne,  
Whar god hym-self resauith ther the crye  
Of the oppresioune and the teranny,  
And with the swerd of wengans down y-smytith,  
The wiche that caruith al to sor, and bitith,  
And hym distroyth, as has ben hard or this  
Of euery king that wirkith sich o mys.

## THE READER.

9 SEPTEMBER, 1865.

The poem was edited in 1839 by Mr. Stevenson, for the Maitland Club, but so inaccurately, that not only are words and sentences omitted, but several passages are quite meaningless. "It will be found," says the present editor, "that the former text can seldom be safely quoted for the purposes of philology; and I cannot but think Mr. Stevenson's claim of being accurate to be especially unfortunate, and the more so because the genuine text is much simpler and more intelligible than the one which he has given." Some of Mr. Stevenson's inaccuracies are very extraordinary. Thus, in his work, we find "speiris" for "spuris," "ane desyne" for "medysyne," "born" for "lorn," "Hymene" for "hyme" (*him*), &c.

The poem is a loose paraphrase of the first of the three volumes of the French romance of "Lancelot du Lac." The English poet has set aside the French prologue and written a new one of his own. In this prologue the author tells how he "undertook to write a romance to please his lady-love; and how, after deciding to take as his subject the story of Lancelot as told in the French romance, yet finding himself unequal to a close translation of the whole of it, he determined to give a paraphrase of a portion of it only." We do not propose to follow Lancelot through his adventures, but we may state that the poem is full of interest on many points, some of which are pointed out by the editor in his preface. "Some lines," he says, "seem to hint at events passing in Scotland at the time when the poem was composed. Thus, 'kings may be excused when of tender age' (l. 1,658); but when they come to years of discretion should punish those that have wrested the law. Again we find (l. 1,920) strong warnings against flatterers, concluding (l. 1,940) with the expression,

Wo to the realme that havith sich o chans!

Such hints may remind us of the long minorities of James II. and James III.; and, whilst speaking on this subject, I may note a somewhat remarkable coincidence. When King Arthur, as related in Book I., asks the meaning of his dream, he is told that it signifies that 'they in whom he most trusts will fail him' (l. 499); and he afterwards laments (l. 1,151) how his 'men fail him at need.' Now when we read that a story is current of a prophetess having told James III. that he was destined 'to fall by the hands of his own kindred,' and that that monarch was in the habit of consulting astrologers (compare l. 432) as to the dangers that threatened him, it seems quite possible that the poem was really composed about the year 1478; and this supposition is supported by the fact that the handwriting of the present MS. copy belongs to the very end of the fifteenth century."

In studying the dialect of the poem, the editor found the utmost confusion. There are errors committed by the scribe in transcribing from an older copy, such as "set" for "fet," and, by a similar confusion between "f" and "f," he has written "first" instead of "fift." He also seems to have allowed himself the utmost liberty in his language. We find, for example, in line 1,765—

Beith larg and iffis frely of thy thing—

"the Scottish form *iffis* (give) and the southern *beith* in close conjunction; and we find no less than six or seven forms of the plural of the past tense of the verb 'to be,' as, for example, *war*, *veir*, *ware*, *waren*, *veryng*, *waryng*, &c." It would be weary work to note all the peculiarities which Mr. Skeat refers to in his preface. The scribe certainly owned no law, going so far as to change "is into *ith*, even in the second person singular, thus producing words which belong to no dialect whatever." We give two or three brief extracts from the book, that our readers may judge for themselves of the style. And first the poet's description of spring:—

Quhen tytan, with his lusty heit,  
Twenty dais In to the aryeit  
Haith maid his coursse, and all with diverss hewis  
Aparalit haith the feldis and the bewis;

The birdis amyd the erbis and the flouris,  
And one the branchis, makyne gone their bouris,  
And be the morow singing in ther chere  
Welcum the lusty sessone of the zere.

From his lecture on the duties of kings we select the following on truthfulness:—

And of thi wordis beis trew and stable,  
Spek not to mych, nore be not vareable.  
O kingis word shuld be a kingis bonde,  
And said It is, a kingis word shuld stond ;  
O kingis word, among our faderis old,  
Al-out more precious and more sur was hold,  
Than was the oth or seel of any wight ;  
O king of trouth suld be the werray light,  
So treuth and Justice to o king accordyth.

Of Mr. Skeat's work we can speak with very great pleasure. He has executed his task in a manner that confers honour on himself and on the society for which he has laboured. It is difficult to be absolutely accurate in a work of this sort, but we are glad to say that, after a careful perusal of the poem, we have only found one error, and that is a typographical one. It occurs in line 1,803.

### CHINESE CLASSICS.

*The Chinese Classics.* Vol. II. Containing the Works of Mencius. By James Legge, D.D. (Trübner.)

MENCIUS was born about B.C. 371, and lived to the age of eighty-four. "His first twenty-three years synchronized with the last twenty-three of Plato's. Aristotle, Zeno, Epicurus, Demosthenes, and other great men of the West, were also his contemporaries. When we place Mencius among them, he can look them in the face. He does not need to hide a diminished head." Such is the verdict of Dr. Legge, who has given us a new and beautiful translation of the Chinese classics. But who knows anything of Mencius? And yet this is far from being the first time he has met with a translator. Perhaps an isolated moralist has no attraction for those who study schools of thought rather than the opinions of an individual. Perhaps the notion that the Chinese have never had any sage but Confucius has prevented the slight investigation which would soon have corrected that mistake. However this may be, Dr. Legge deprives us of all excuse for longer ignorance. The chain of the Chinese sages has at last found its exponent. Their opinions on the nature of man, the doctrine of universal love, the doctrine of refined selfishness, the practical path to be held between these extremes, are no longer a mystery. That any great light thereby will be thrown upon our destiny, or that we shall find the problems of life already solved 2,000 years ago in China, is not to be expected. But it will be refreshing to many to observe the way in which those problems were treated by men who not only lived and died long before the appearance of Christ, but who cannot be suspected of having derived their morality or their politics from Moses or from Greece.

Mencius' doctrine of human nature was, as nearly as possible, identical with that of Bishop Butler. "The will," he said, "is the leader of the passion-nature. The passion-nature pervades and animates the body. The will is first and chief, and the passion-nature is subordinate to it." "Man is formed only for virtue. There is in man a natural principle of benevolence, a natural principle of righteousness, a natural principle of propriety, and a natural principle of apprehending moral truth." "If men do what is not good, the blame cannot be imputed to their natural powers." "When men have the four principles, yet say of themselves that they cannot develop them, they play the thief with themselves, and he who says of his prince that he cannot develop them, plays the thief with his prince." The depravity of human nature was no part of the creed of Mencius. He had never heard of the Fall. He considered crime and error as the result of mere weakness or idleness. The ideal he set up was to be found in the sages, and he contended that it was within the reach of

every individual. He did not call sinners to repentance, but the righteous to still further exertions. He did not utter the impossible precept, that men were to be perfect as their Father in heaven is perfect; but he pointed to those whose lives and actions were known. He did not ask men to be stamped with his image, and to be born again, but he said, "The great man is he who does not lose his child's-heart." No more beautiful saying is to be found in any religious scripture. It is strange, after this, to assert that in Mencius' lessons on human duty there is no hope for his countrymen. This can only be true in the sense that they are so perfect, that all that can be wanting is the material prosperity to carry them out. The philosophy that civilization must precede Christianity, which is quite a modern discovery in Europe, was familiar from the days of Confucius to the extreme East. Confucius observed, "How numerous are the people!" Yew said, "Since they are thus numerous, what more shall be done for them?" "Enrich them," was the reply. "And when they have been enriched, what more shall be done?" The master said, "Teach them." The genuine wisdom of Confucius is acknowledged by even the Christian missionary.

The opinions of Mih Teih, whose date slightly preceded that of Mencius, upon universal love, will cause much surprise to the Christian reader. "Suppose that universal, mutual love prevailed throughout the empire—if men loved others as they love themselves?" Here, at least, we have the idea of loving our neighbour as ourself anticipated by more than two hundred years. "This was what our master, the philosopher Mih, meant, when he said, 'We must not but advise to the love of others.'" And again: "I have heard that he who wishes to play a lofty part amongst men, will be for the person of his friend as much as for his own person. Reasoning in this way, when he sees his friend hungry, he will feed him; cold, he will clothe him; sick, he will nurse him; dead, he will bury him. Such will be the language of him who holds the principle of universal love, and such will be his conduct." We have also the idea of removing mountains, but in a less hyperbolical form than what was promised to surpassing faith:—

This universal, mutual love is benevolent and righteous. That we grant, but how can it be practised? The impracticability of it is like taking up the Tae mountain and leaping with it over the Keang or the Ho. We do, indeed, desire this universal love, but it is an impracticable thing! Our master said, "To take up the Tae mountain, and leap with it over the Keang or the Ho, is a thing which never has been done, from the highest antiquity to the present time, since men were; but the exercise of mutual love and the interchange of mutual benefits, this was practised by the ancient sages and the six kings."

It is very interesting to find that none of the Chinese philosophers professed to enunciate a new law, or a new morality. Their express aim was only to fulfil and to restore what had been delivered from the beginning. Their constant appeal is to the perfect wisdom of the founders of the empire, whose precepts merely require development to comprehend every subject of human action. Dr. Legge complains that the political maxims of Mencius are applicable only to China. But the Chinese amount to nearly one-third of the human race. And if this legislative foresight, combined with that of Confucius, and a few other names, has been sufficient for China for more than two thousand years, he has accomplished what no other religious sage has succeeded in doing. Moreover, he was assisted neither by the force of arms nor the enthusiasm of the missionary. The influence obtained by sound common-sense, and by a code of morals to which even Dr. Legge can only object that it does not acknowledge the doctrine of the Fall, or allow for any rapturous devotion of the Creator, is a spectacle well worthy much more attention than it has received; but the materials for coming to an opinion on that and many other similar problems will not be wanting to the English

## THE READER.

9 SEPTEMBER, 1865.

reader, if Dr. Legge is spared to complete the task he has so well begun. We look forward with interest to the third volume of the series of the "Chinese Classics," which is to consist of the most ancient historical records of China, and perhaps of the human race.

### SIMANCAS.

*Documents from Simancas Relating to the Reign of Elizabeth (1558-1568).* Translated from the Spanish of Don Tomas Gonzalez, and Edited, with Notes and an Introduction, by Spencer Hall, F.S.A., Librarian to the Atheneum. (Chapman & Hall.)

WHAT have critics ever done, that it should be laid upon them to give an appreciation of a work put together as this is? The title is appetising; the book has all the outward promise and indication of sedulous treatment; it has preface, list of authors consulted, table of contemporary princes, introduction that seems rather expansive, but may possibly be all the better for that, some seventy pages of the "documents" relating to the reign of Elizabeth, and that blessing at the end of compilations, a nominal index. And of all this what is the outcome? The reader is soon checked in his conscientious and even sanguine purpose to read steadily and carefully through a book of such moderate extent. He turns back once or twice in the early pages of the introduction to assure himself that it is by no fault of his own that he has drifted so far out of soundings; then he turns over the forward pages with hands more and more liberal of the quire, till at last he starts to right and left, and to and again, in desperation of finding any clue to the heart of the labyrinth, and may be pardoned—unless bound by the duty of a critic in face of the enemy—if he determines to get out of the maze while he can, and bangs the door behind him, shuts up the book, and departs.

It is the more provoking to have to say this as the editor evidently fails not from lack, but from mismanagement of his qualifications and accomplishments; and for once we have an example of a work that would have been better had the author taken, not more, but less pains.

As touching the chief point of all, what is the nature and character of the "documents" promised in the title-page? Document is a word not to be used lightly in a matter of historical inquiry. It means original documents, if it means anything—documents not only well authenticated in respect of date and authorship, but in condition so far, if not complete, at least unmodified as to retain the interest of evidence at first hand. We do not require to be put on our guard against accepting as true history of a time whatever may be found in autograph of the time, either in the British Museum or at Simancas, or to be warned against following those who are so misled by complacency at their own discoveries. Once is enough for most to have found themselves singing a humiliating second in such a palinode. But when documents are promised, we claim as of right to have for once, at least, some scene of history transmitted to us by ways that, at any rate, have only suffered by a single distorting medium, and corrected for that, are only subject further to our own personal equation. What have we here that will give us any such satisfaction? We are referred in the preface to a "very valuable series of documents printed in the seventh volume of the memoirs of the Royal Academy of Madrid, 1832, under the title of—we have to translate for ourselves—'Observations towards the History of Philip II., in his Relations with Elizabeth of England, from the year 1558 to 1576, Formed on Examination of the Original Diplomatic Correspondence of the Period, by Don Tomas Gonzalez, Canon of Plasencia.'" But observations based on documents are not the documents; it is much if extracts can be safely called so; and here we are left quite in the dark as to how Gonzalez may have treated the materials, which in themselves are also undefined and uncharacterized. Of Gonzalez himself we

are told, and told no more, "some notice is given by Mr. Stirling in the 'Cloister Life of Charles V.,' page xi.;" and, in the same way, we are sent elsewhere, not merely for the best account, but for any account at all of the castle and the collections of Simancas. Notorious as these things may be to historical investigators, and even readers, it is scarcely fair towards those for whose instruction only the introduction could have been intended, to send them so far afield as the preface of M. Gachard, or even the Calendar of State Papers, to complete their information.

The section of the book headed Documents runs on uniformly year by year, with dates of days in the margin corresponding not with the dates of quoted despatches, but with the incidents referred to. Paragraph follows paragraph, with no notice of the authority it is quoted from or quotes; and statements that are presumably due to the Count de Feria, Spanish Ambassador in London, are mixed up—or, what is as bad, appear to be so—along with glosses and generalities that come we know not whence. At page 52-53, the notice that de Feria absented himself from Elizabeth's coronation under pretence of ill health, is no doubt genuine and documentary enough, but what are we to make of the next paragraph?

Among the members of the Cabinet a well-grounded suspicion arose that the Queen entertained the thought of marriage with Philip, and they employed every means in their power to dissuade her from the act. They represented to her the suspicious character of the king, his religious intolerance, the unhappiness of Mary, the threatened rebellion in Flanders, the doctrines of the Reformers pullulating in Spain, &c.

The translator avows that, with regard to the documents—documents!—"his desire has been to render the text correctly, without the slightest attempt at style." It is unfortunate that he did not exert like self-control in the introductory narrative, which is "designed to connect and illustrate the evidence they adduce." We read such a sentence as this: "In that hour, when Ruthven, stricken with the pallor of death, hectic with the flush of passion, stood before her as an apparition of evil, she had vowed revenge"—and become aware that style may require even sterner treatment than that supposed infallible corrective recommended by Sydney Smith, the erasure of every alternate word.

Thus much, with considerable regret, in the interests of history and of the history of a period which, of all others, deserves, and it must be said requires, to be jealously guarded. The book is certainly not well constructed, but it may, probably enough, contain help somewhere that will yet be valued by some verifier of the past, and affectation in style is at least better than wrong-headed paradox—how much more comfortable, then, than intolerable style, with paradox into the bargain.

L.

### NEW NOVELS.

*A Mere Story.* By the Author of "Twice Lost," "Linnet's Trial," &c. 3 Vols. (S. Low and Co.)

"A MERE STORY" is what it purports to be, a tale composed of simple incidents nicely put together, with sufficient variety of character, description of scenery, and instructive morality to render it a charming book of its class. And this class, although it may not attain to the erudition and brilliancy of a George Eliot or Amelia Edwards, is good, pleasant reading, when one is tired, during these hot days, with but small exertion. The healthy tone which Miss Smedley has infused into her details of a sister's unselfish love, so touchingly displayed in the pages of this novel, is refreshing by its truthfulness to nature, and is not excelled in any work of fiction of the day.

The opening chapter introduces us to the cheerful fireside of Mrs. Lennard, a widow lady, and her family of three daughters and two sons. Sydney, the eldest, is a medical

man, rising into practice, but not yet so noteworthy as to be summoned by telegram from town to Northborough, a manufacturing place eight hours distant by rail from London, and yet receives such a summons; and, as the message implies that a previous mandate had required his presence the day before, he does not ignore the imperative demand for his immediate attendance. Tired though he was with the day's cares, the young doctor hurries off to the Northern Station, and arrives at Northborough about six o'clock on a grey, windy morning:—

As he jumped out, he caught sight of a woman's face wearing an indescribable expression of waiting and anxiety. She was dressed like a respectable servant, and she went up to the guard as soon as his foot was on the platform, and addressed him in a low, hurried voice. He at once repeated her question, with that peculiar railway shout which seems to have been invented for the express purpose of making the names of persons and places unintelligible to the world at large.—

"Any gentleman here for Mrs. Jer—myn!" cried he. "Mr. Senna here for Mrs. Jer—myn!"

"Here, here!" exclaimed Sydney. The woman turned and looked at him questioningly.

"I received a telegram last night, and started immediately," continued he. "Is she alive?"

"Yes, Sir; at least she was half an hour since. But it's as much as you can say, and I hardly know by this time. We expected you yesterday. If you please, I'll show you the way."

A mistake has produced this introduction of utter strangers to each other; but the desolation of two young creatures so oddly thrown upon his skill and compassion, induces Sydney Lennard to remain at Northborough until his patient, Mrs. Jermyn, or rather Helen, Mrs. Rivers, is out of danger. Eva Lake, her sister, has confided to the "Doctor" as much as she knows of Helen's painful position, and by his advice determines to remain at Northborough to await the result of his efforts to gain such information respecting a certain Captain Adrian Rivers (who among other aliases has adopted the name of Lennard, and for whom the telegram was intended), as shall liberate both sisters from the dilemma in which they have placed themselves.

Sydney Lennard is, of course, the hero, as Eva is the heroine; but we have many other characters to fill up the canvas. Mrs. Lennard, a genial, loving, energetic mother; Robert, her second son, "a tall, frank-faced, bright-eyed creature, whose smooth brow, easy manner, and insouciant expression, made him look a good ten years younger than his hard-working, thoughtful, and somewhat careworn brother. His voice and his laugh were irresistible; he was the life of every circle that he entered; his arrival had a kind of champagne effect upon the home group, putting them all into their best spirits in five minutes. Quizzing Emily, petting Jessy, chaffing Sydney, coaxing his mother—repose, languor, gravity, depression, were all impossible while he was in the house." Yet Bertie, as his family called him, was a source of much anxiety, a sort of rolling stone, obtaining situations, but keeping none, until somehow he becomes, unknown to them all, private secretary to Mr. Rivers, of Fenbury Park, an eccentric disappointed bachelor of scientific pursuits and Darwinian proclivities. Admitting that his nephew, Captain Adrian Rivers, may have "behaved like a scamp," but refusing to believe Sydney Lennard's assurance that the Captain has married his patient, Helen Lake, because Sydney could not produce facts or proofs, Mr. Rivers, though furious when contradicted, is won by the manly bearing of his secretary's brother, whom he cordially invites as a friend to his house.

Mr. Rivers has a ward, Isabel Deane, a fast young lady and an heiress, who disrespectfully calls him "Merlin," on account of his ubiquitous knowledge. She is under an implied engagement to Adrian Rivers, but cannot quite make up her mind to marry

## THE READER.

9 SEPTEMBER, 1865.

him. Meanwhile, the Captain is on account of his debts in disgrace with his uncle, who has banished him to Mont des Pres, a small town in France. This place of residence he exchanges as quickly as may be for Paris, carries on his cruel correspondence with Helen, through an unprincipled ally in his uncle's house—viz., Larton, Mr. Rivers' butler and factotum. Helen's passionate love for Adrian makes her the ready dupe of his deceit and intended treachery. A slight permission from Isabel induces Mr. Rivers to recall his nephew and pay his debts.

"If you are good," wrote Miss Deane, "we may go together to the old seat, at the end of the wood-walk, and there you shall tell me all—that is to say, if I am in a humour to listen; but I am afraid you are still a little too naughty for us to fix the date of that day. What do you think yourself?"

Adrian's duplicity meets with its recompence; as in striving to outwit Larton the man betrays him in revenge, and brings Helen upon the scene. Her sister's heartless selfishness and Eva's devotion to her are cleverly sketched, and form the groundwork of the story, the action of which does not flag for a moment. Smart bits of dialogue, touches of humour, and quiet fun at the expense of Isabel's "dear philosopher," carry one on pleasantly to the end, which of course is marriage; for her influence being paramount, what can Mr. Rivers do but submit? "He being absorbed in thought, "and as Isabel wished the wedding to take "place at Fenbury Park, he was induced to "agree to everything."

He had just then discovered how to produce piebald mice, and the discovery was a great triumph, and it completely engrossed him. It induced him to agree to everything. Indeed, in the course of his experiments he had inadvertently obtained one mouse of such an unearthly and tremendous kind, that he thought that he could discern in it symptoms that some day he should be able to obtain a bat. He did not venture to mention this hope to anyone; it was too precious to be lightly discussed. But he exhibited his mouse to all who were willing to see it, as a curious and unusual variety of the species; and he stood by, vigilant and expectant, while its peculiarities were commented upon. Occasionally he drew attention to what I think he called a process about the fore-arm, and I am nearly sure that he once mentioned a rudimentary membrane; but these were the only leading observations with which he indulged himself. He simply watched, listened, and waited. But you should have seen the exultation in his eyes when some unconscious spectator made a remark about the mouse which he knew to be applicable to a bat. He was reserved on the subject; he did not allow his guests to discover the evidence which they were supplying unawares.

"Ha!" he would say, "you notice that, do you? You've a quick eye—you've a quick eye! Just oblige me by standing a little more to the left. If he will only keep still you will see the light fall well on his flank, and then, perhaps, you may notice something more. Thank you—so. Now, I think—" But at this critical juncture Mr. Rivers generally became excited, and spoke so loud that he made the mouse jump, thereby spoiling his exhibition for that morning. When he became fully aware of this foible in himself, he was on his guard, and used to whisper and walk on tiptoe as he approached his treasure's cage, in a manner very trying to the risible muscles of unscientific visitors. By observing these precautions he succeeded in obtaining a great variety of comments under favourable aspects, which, being duly recorded with all possible brevity in his diary, were likely to puzzle a future biographer, who would hardly know what to make of such entries as the following: "May 19, Lord Dartsbury noticed his toes;" or, "June 21st, H—y would say something about his profile, and, when pressed hard, only smiled, and changed the subject. There is no doubt what he thought. He is too honourable not to give me precedence if he has a success himself. I saw how he eyed the ribs." It will be easily understood that Mr. Rivers had no attention to spare for such a trifling as a common-place human wedding.

The opinion we expressed of Miss Smedley's truthfulness as a delineator of character on the appearance of "Twice Lost," is fully confirmed by the perusal of "A Mere Story."

Both tales are as charming as they are original.

*Latimer's Luck.* By the Author of "A Woman Against the World." 3 Vols. (R. Bentley.)

It was "Latimer's Luck" to be dependent upon his cousin, Colonel Stratford, to whom he was heir-at-law. The Colonel had "educated the young fellow as a landed proprietor *in posse*—i.e., he taught him, or rather had him taught, nothing worth knowing," allowing him 300*l.* a-year, with nothing to do. In that lay a grievance. At any moment the income might stop, and Latimer had no means of obtaining his own living. Moreover, if the Colonel married and had a son, his claim to the property would be at an end. Many chances were against him. Colonel Stratford is a beau of the first water. Bright, polished, petite in person but well proportioned, not young, but refined in his tastes and epicurean in his habits. No man in Bath bowed with a like grace, no man excelled him in conversation and elegant manners; yet is he withal an unmitigated villain, given to lying and evil innuendo with such a perfect tact that the victim strives in vain to disentangle the web of falsehood which gathers round him. It is Latimer's luck to love the same girl as Colonel Stratford intends to make his wife. Esther Montgomery is the only child and heiress of Mr. Ransome Montgomery, one of the "old West India merchants of Bristol, reputed to be as rich as Rothschild," but, despite of his wealth, a sordid miser. Neither visiting nor being visited, his daughter would have led the life of a recluse, but for her rich aunt, Mrs. Pigott, who resides in the Circus at Bath. Latimer was ever a welcome guest there; Mrs. Pigott liked him, and Esther—well, Esther loved him; but, as the youth was dependant and poor, she pined in secret, and let concealment, &c. "It was also Latimer's luck to "have time on his hands for quixotic schemes. "Most young men of uneasy minds believe "they have a mission to regenerate the world. "Latimer's views were not so extensive; still, "he had proposed to himself a tolerably difficult task." This task arose from a previous incident, which occurred as he and his friend Vaux were returning from an entertainment late one cold night, and Vaux was rather intoxicated. Two young girls passed shivering over the bridge into the Dolemeads. Blanche, the younger, was terrified by Vaux, who declared "he would see her home;" Maria Lyman, an actress at the Bath Theatre, appealed to "Latimer to protect "her; but before he could interpose, Vaux "threw his arm round Blanche's neck."

"Don't be silly," cried Latimer, and seizing his friend by the wrist, he loosened his grasp, and drew him off.

"Thanks, Sir; oh! a thousand thanks," said Maria. She turned towards her defender, the lamplight fell upon her face, dancing in her glowing black eyes.

Latimer raised his hat. "She is undoubtedly pretty," said that young gentleman to himself, as he clutched his half-drunken friend, and drew him away.

"Don't say a word about this affair to mother, Blanche, it would make her so nervous, and, when you are late, one of us will come for you."

These two girls are the children of an idle, dissolute father, and a poor, sick, feeble-minded mother. Both are beautiful. Maria is high-spirited, self-reliant, and ambitious; Blanche, as a milliner's girl, is over-worked, fragile, and timid. Some few nights after this adventure, Vaux and Latimer are at the theatre. Vaux induces his friend to stroll with him into the green-room. Maria is there, and recognizes him. She thanks him for his help and prays him not to let her "be recalled to the memory of his friend." In the bills she is called Miss Lucille D'Arcy. *Twelfth Night* is to be performed, and her ambition is to shine in her profession, so that she may redeem those she loves "from the prison vaults of poverty." An opportunity offers for her to take Olivia's part. She fails, and Latimer,

in his single-hearted kindness, offers her advice and sympathy, and ultimately befriends her by lending a portion of his income to place her sister Blanche as an articled pupil at a first-rate school. But every quixotic act tells against him. Esther's mind is poisoned by the Colonel's misrepresentation, and Latimer is sent adrift without a shilling. He goes to Bristol, and becomes involved in the Reform Bill riots, is tried for sedition, and acquitted. The Colonel, rejected by Esther, marries Maria. A son is born to him, and, by a conspiracy of Hoggan, the Colonel's natural son, and Charlotte Holmes, the nurse, the baby is spirited away. Of course, Latimer is accused of the deed, but, through all the vicissitudes of his troubled career, his manly truth and purity of purpose carry him safely to the "ultimate goal of his life," and he and Esther are happily united. The story is too full of incident to admit of further detail. "Latimer's Luck" is, however, a good bustling circulating-library novel, thoroughly fitted for those who love reading which does not require much thought, or to whom a well-told tale is ever welcome as relaxation from graver studies.

### DANTE AND HIS WORSHIPPERS.

*Dante as Philosopher, Patriot, and Poet. With an Analysis of the "Divina Commedia": its Plots and Episodes.* By Vicenzo Botta. (New York: Charles Scribner. London: Trübner & Co.) *The Inferno of Dante.* Translated in the Metre of the Original. By James Ford, A.M., Prebendary of Exeter. (Smith, Elder, & Co.)

HAD Dante been less shamefully persecuted he might have been less renowned. As it is, the city which gave him birth, and from which he was banished, seizes every occasion for paying high honour to his memory; thereby making reparation for the treatment he received during life. Partly influenced by his poetry, and partly by his sad lot, those who peruse his works and the story of his career are always ready to do what in them lies to sound his praises and magnify his fame. The sixth centenary of his birth, which fell in last May, was seized upon alike by Florence and his admirers in every part of the world as a fitting opportunity for proclaiming their devotion to the greatest of Italian poets. A festival was held at Florence. In England, the Rev. Mr. Ford has published a new translation of his "Inferno;" and, in America, Signor Botta has published a volume containing an analysis of his works and a sketch of his career.

The latter volume is by no means worthy of the occasion or subject. If we except the paper and typography, nothing about it is worthy of commendation. The greater portion of its contents have either appeared in preceding volumes, or is simply the repetition, in different words, of what others have written. Paragraph after paragraph is quoted from Dr. Barlow's "Critical, Historical, and Philosophical Contributions to the Study of the 'Divina Commedia.'" The extracts are all noteworthy; but we cannot admit the propriety of publishing a volume of good extracts. Where Signor Botta is original, he is dull and uninstructive. When he is not common-place, he is dogmatic. He either shirks the questions which have puzzled all commentators, or else he resolves them in a vague manner which will satisfy no one. For instance, he tells us that: "The 'Divina Commedia' may be considered as a grand dramatic composition, representing in its symbolic action both humanity in its struggle for the conquest of civilization, and Italy in its progress towards nationality. The 'Inferno,' the 'Purgatorio,' and the 'Paradiso,' are the three acts which represent the beginning, the development, and the conclusion of the drama;" and its principal personages are, Dante, "the protagonist; Beatrice, the symbol of Divine Wisdom; and Virgil, who here appears as the Bard of the Roman Empire, the precursor of Christianity,

## THE READER.

9 SEPTEMBER, 1865.

"as he was regarded in the Middle Ages, "and the symbol of human reason." Now, in place of the symbolic method of interpretation which is adopted in the foregoing passage, we infinitely prefer the most uncompromising realism. Dante as a man, and Beatrice as a woman, interest us; but who can care for either as the representative of a symbol? After all, it matters little to us what the poet meant to imply. What he has done is that which alone concerns us: how he has done it is that which a critic should discuss. His secret is buried with him. His poem lives not because of the symbols it may contain, but because of the beauties of its style, language, and versification. Those who seek for more in the "Divine Comedy" will be perpetually engaged in attempting to clasp what is intangible.

The analysis which Signor Botta gives would have been more attractive, had he chosen any other translation than Cary's as that from which to make his extracts. That Cary did his work very faithfully is as undeniable as that it is thoroughly inadequate. In the hands of a great poet, blank verse may be made the medium of conveying the most varied thoughts; but as an instrument for translating it is about the most inefficient which could be employed. If the translator who employs it would be literal, he must be bald and stiff: he can render the sense, but cannot reproduce the melody of the original. In fact, we should prefer a translation in prose, of any poem, to the finest blank version which has yet been produced. Let us take, for example, one of the most familiar passages in the "Inferno," the inscription over the portals of Hell. Cary's version is the following:—

Through me you pass into the city of woe :  
Through me you pass into eternal pain :  
Through me among the people lost for aye.  
Justice the founder of my fabric moved ;  
To rear me was the task of power divine,  
Supremest wisdom, and primeval love :  
Before me things create were none, save things  
Eternal, and eternal I endure.  
All hope abandon, ye who enter here.

The prose version of Dr. Carlyle is, we think, hardly less poetical than the foregoing versified translation:—

Through me is the way into the doleful city ; through me the way into the eternal pain ; through me the way among the people lost. Justice moved my High Maker ; Divine power made me, wisdom supreme, and primal love. Before me were no things created, but eternal, and eternal I endure. Leave all hope, ye that enter.

Whenever possible, all metrical translations should be a close reproduction both of the style and metre of the original. By acting on this maxim, the Germans have produced the most satisfactory versions of foreign authors of which any nation can boast. Our language is less flexible than German, yet in skilful hands it is a most effective instrument. The Reverend Mr. Ford has endeavoured to show that it is capable of rendering the triple lines of Dante. As an illustration of the difference between the rendering of a rhythmical and rhymed kind, we shall cite the passage from this version which corresponds with the one cited from that by Cary:—

By me is reach'd the city, doom'd to grieve ;  
By me, the grief, that must eternal prove ;  
By me the people lost beyond reprieve.  
Justice my mighty Maker first did move ;  
Omnipotence Divine my structure rear,  
The supreme Wisdom, and the primal Love.  
Save things eternal, none created were  
Prior to me : eternal I remain :  
Despair for ever, ye, who enter here.

This, though superior to blank verse, is by no means equal to good prose. Indeed, the passage is one which no translator can adequately represent in a foreign tongue. The simplicity of the language is the despair of translators. There are some poems of which parts may be well rendered into English, but which will ever baffle the best English translator to render entire. One of these is "Faust," another is Dante's Epic.

There are detached passages in this translation to which very slight exception can be taken. One of these occurs a little after that quoted above. Dante is describing the sights and sounds of the terrible place into which he has entered, and uses these words:—

There sighs and moans, and loud bewailing woe,  
Resounded through the dim and starless haze ;  
The which constrain'd at first my tears to flow.  
Discordant tongues, speeches of horrid phrase,  
Words of distress, accents of anger sore,  
Shrill and hoarse voices, sound of hands with  
these,

An uproar made, which gather'd more and more  
In that eternally dark-tinted air,  
Like to the sand when whirlwinds sweep the  
shore.

Passages like these induce us to ask why no one has yet produced a good version of the "Divine Comedy" in the Spenserian stanza? Mr. Worsley has shown with what effect it can be made to reproduce the ideas of the Odyssey; among English metres there is not one which seems better fitted for being made the vehicle of communicating to an English reader the beauties and peculiarities of the poem of Dante.

Among passages which we can praise almost without reserve, occur lines which we can hardly condemn too strongly. The following is a specimen:—

I had not credited so many unmade  
By Death in all his universal reign.

Again, there are lines which displease us, partly because they are too literal, and partly because they are not literal enough, such as:—

Broke the deep trance and slumber of my head  
A heavy thunder.

The last words are those which we do not like. The first line contains superfluous words. In the original there is nothing about "deep trance and heavy slumber." The exigencies of versification have, in this case, obliged the translator to be incorrect as well as inelegant.

There are other words and phrases which offend our ears; yet we must admit that, taken as a whole, this translation merits our praise. It is quite as correct as any blank verse one we have examined, and to an English reader it conveys a very complete notion of the original. To us it is by no means a subject of rejoicing that so many translations of this and other poems should find purchasers. The difficulties of the original are neither many nor great. The pleasure of perusing the original is infinitely greater than can be afforded by the most perfect translation. Next to having known Dante in the flesh is the gratification of communing with him in his works. Other poets may have larger hosts of readers; but none excites in the breasts of those who are intimately acquainted with his writings more profound awe and more entire respect. He is the favourite poet of a small circle only; but within that circle he is worshipped as a divinity.

W. F. R.

### THE FORTNIGHTLY REVIEW.

The reputation of this review will not suffer from this, its eighth number. Mr. Merivale adds to our increasing stock of "historic doubts" by a searching criticism on the authenticity of the "Paston Letters." The way in which the "originals" found their way to the palace of George III., and there finally disappeared, is very suspicious; yet, on the other hand, we are compelled to believe, if the whole story of the editor of the letters be false, that a distinguished literary society allowed its name and reputation to be made use of almost as a voucher for the temporary deposition of the originals into its custody, in a way that is almost as difficult to account for. "I do not profess to solve the problem. I only place the two suppositions in face of each other." The "Letters" themselves are perfectly unique. A quite private family, undistinguished either in arts or arms, the Pastons, during the fifteenth century, including the dark period of the Wars of the Roses, must have been constantly writing to each other, keeping their correspondence, and finally collecting it in one repository. There existed "complete letter writers" in those days, both French and English, though none

of them have ever been printed. It would be very interesting to compare some of these manuals of epistolary composition with the "Letters," and we hope the essay of Mr. Merivale will lead to their speedy publication. The external evidence in favour of these documents is, therefore, weak. We have not space to enter into the arguments derived from the use of colloquial expressions, which we should certainly have supposed to be of much more recent date than the fifteenth century. The servile adherence to common authorities, in the alluding to the incidents of the age, is a powerful argument, and well pushed by the critic. Mr. Merivale thinks it impossible that any boy should have remained at Eton in 1478 until he was nineteen years old, but that is precisely the age prescribed by King Henry's Statutes for the superannuation of his scholars, and the school must always have included several boys entering their twentieth year. However, the difficulties raised by Mr. Merivale cannot be set at rest without a more painstaking investigation than the subject seems yet to have received.

We trust the "Black Death" is not meant as a prophecy of what we are to expect from the cholera. For Mr. Seebohm wishes "to establish beyond reasonable doubt that a very large proportion—as least one-half—of the people of England died of the plague of the Black Death in the years 1348-49." We do not see how this fact, if it be one, accounts for another fact less difficult of proof, "that England, unlike every other country in Europe, is divided by hedge-rows into separate fields." The article does not help us at all to the reason of this peculiarity, or how it can possibly be connected with a plague. The writer appears to have been so anxious to prove the fact of such a terrible mortality having taken place, as to have omitted to draw the economical conclusions he at first intended. The records he has searched apply principally to the clergy of the monasteries of four eastern counties. But we doubt the soundness of the argument, that because two-thirds of the inhabitants of many a monastery, or even of the parish priests, fell victims at that date to a plague, therefore we are bound to assume that the average lives of the clergy were as good as they are at the present day, and therefore that at least one-half of the whole population of the whole of England perished within twelve months.

Lord Amberley gives us a complete exposition of his political creed, under the title of "Liberals, Conservatives, and the Church." We quite agree with him, that the most "conclusive test of political bias is afforded by that class of questions which relates to religion." He is unsparing in his ridicule of those who attempt to confuse the interests of the Church with those of religion. Conservatives, or many of them, have no doubt a conscientious belief in the duty of intolerance. "Individual Liberals may be Churchmen; but attachment to the Church does not, and cannot, form any part whatever of the Liberal faith. . . . He may be a friend to the Church, but he is a much greater friend to religious liberty; and religious liberty he interprets to mean not merely freedom for each man to think as his conscience bids him, but freedom to do this without incurring the slightest penalty, or suffering the slightest disability for so doing." The distinction between those who regard the Church as a means towards an end, and that large party to whom the Church itself is an all-sufficient end, is clearly set out. One side judges the tree by its fruits, the other by its blossoms, or its intentions. The hypocrisy of those Liberals who fight against the Church in the name of the Church is deservedly stigmatized; and should any devout Tory ever be curious enough to discover Lord Amberley's opinions, he could not do better than learn how to speak of his enemy from that enemy himself. We fear that his exultation would, however, receive a severe shock if he went on to the next paragraph, and found that, so far as a man is attached to the Thirty-nine Articles, &c., he only "deserves the same respect as a sincere Jew or an orthodox Mussulman." Lord Amberley's views cannot be mistaken, and we trust he will see no reason to change his present opinions.

Mr. Adams discusses the patent laws, under the heading "The Political Economy of Copyright." That socialism has, of late years, made great strides in England is perfectly true, but we do not think that "joint stocks limited" are entirely due to unhealthy competition. A nobler principle lies at bottom, if not perfectly apparent—namely, that the labourers shall share in the profits with capital. This is no attempt to deprive the skilled labourer of his proper reward, but to carry on undertakings through the

# THE READER.

9 SEPTEMBER, 1865.

principle of interesting many persons in its success. That property will "collapse for a time" in consequence, we see no reason to believe. The object of the writer is to show that patent-right is the same as "copyright," and that "copyright" includes almost all personal rights, down to the exclusive possession of a name. Now, there is no such thing in this country as property-title in a proper name. It is only the fear of ridicule, and the uselessness of the attempt, which prevents every ballad-writer subscribing himself "A. Tennyson." But where there is anything to be gained, people either assume the name they wish, or, as in the case of the manufacturers of Eau-de-Cologne, search throughout Europe for a person legally entitled to it, and make him a nominal partner in their business. Copyright in title, again, is not only a property, but is perpetual so long as it is in *bond fide* use. This is for the legal purpose of identification. It is not devised for the benefit of the possessor only. The title of a corporate body, whether "joint-stock" or otherwise, is a protection to the public. For the bearers can be sued in it as well as sue. The rights are reciprocal. But we cannot go further into this now. If the patent laws are to be upheld, it must be on their own merits. To support them by attempting to confound rights of various kinds by the simple process of forcing upon them all one common name, appears to us to savour very much of what the writer so grievously complains of himself—namely, the overriding by arbitrary power of distinctions which, though apparently small, can be fully defined, and which display an invention and a refinement in the discoverer which ought to have its due reward.

The Editor gives us a popular exposition of Mr. Grote's Plato. There is a poem, "The Apple of Life" by Robert Lytton; Mr. Trollope continues the story of "The Belton Estate"; and Mr. Bell commences an account of "Social Amusements under the Restoration."

## THE MAGAZINES.

*Blackwood* opens with the first part of a most interesting "Memoir of the Confederate War for Independence, by Heros Von Borcke, Chief of Staff to General J. E. B. Stuart." Von Borcke—we do not know what commission he ultimately bore in the Confederate army—commenced business by running the blockade at Charleston, where he seems to have been in more danger from his friends than his foes. He reached Richmond in May, 1862, when "the vast army of McClellan hovered upon the northern and eastern skirts of the city, and over the line of the Chickahominy," and "an attack of the enemy in heavy force was expected at any moment." Gold was then cent. per cent. premium, but M. Von Borcke had no time to consider the rebel finance, and hurried to the front to witness the Battle of Seven Pines. This was not an important, though a very costly victory to the South. The principal generals, with President Davis, rode over the field next day, running considerable risk from the enemy's sharpshooters; the writer being employed as an aide-de-camp. The Confederate authorities do not seem to have been very ready to employ the Prussian ex-draagoon, but during the Pamunkey expedition he rendered such important services to General Stuart, that his report at once secured him the commission of captain. Here we leave him and hope for the continuance of his diary next month. "Piccadilly" comes to a conclusion, and "Miss Marjoribanks" reaches the eighth part. We have the first part of "Switzerland in Summer and Autumn," which cannot omit to have some inevitable remarks on the recent catastrophe on the Matterhorn.

*Frazer* reminds us of Knickerbocker by a sparkling article on New York, under the title of "Mannahatta." The writer traces five formations of as many races of men who have left earnest of their occupation of the triangular island which forms the seat of the most populous city of the once more United States. The last of the original Mannahattans has long since passed away; but the descendants of the Dutch have not by any means disappeared before the more kindred nations who are there congregated together. Still, though the Prince of Wales did receive an ovation from the New Yorkers, he has not yet gone to settle, as the Yankee nation, it seems, expects the Pope will shortly do. We have the second part of the "Reminiscences of the Court and Times of the Emperor Paul I. of Russia," in which the shocking story of his assassination is told with great detail, and by one who was apparently all but an eye-witness of the deed itself. Plans of the interior of the

palace, and of the Emperor's cabinet or bedroom, in which the last struggle took place, bring the scene almost too closely before us. The writer of "On Lessening the Irksomeness of Elementary Instruction" struggles hard to find a royal road to learning, not for the pupil, but for the teacher. It can only be a schoolmaster who pleads for making the school the most attractive, the most comfortable, and prettiest building in the parish. We quite agree that the children should be made as happy as possible under instruction, having very vivid memories ourselves of forms meant to hold ten on which twelve were always "accommodated," and other inconveniences, which made the principal lesson that of how to acquire knowledge under difficulties. "The Priest in the Congregation" is a very good and not too serious a paper on the proper mode of conducting public worship, and may be studied with advantage by persons of the most different opinions. We quite endorse the sentiment that "prayers should be prayed, not preached or read."

*Cornhill* has an amusing biography of Benvenuto Cellini, who was more remarkable as a man, perhaps, than even as an artist. He to some extent proved the truth of Alfieri's saying, that the violent lives of the Italians of the middle ages proved the inherent value of the stock. Professor Liebig is interesting on "induction and deduction," illustrating the former method by the history of the art of photography, some of the processes connected with which have not yet found their explanation. His idea that when an art has been shaped into rules "even the ungifted acquires the power of the most gifted, most skilful, and most experienced practitioner," has been anticipated by Lord Bacon, who thought the spread of his philosophy would tend to equalise all intellects; but such has not yet been found the case, either in the domain of science or even practice.

*Macmillan's Magazine* for September will always be referred to on account of Mr. Deane's diary of the Atlantic Telegraph expedition. The chart and sketch, showing the various positions of the Great Eastern during its attempt to recover the cable, enable the reader to follow the great ship during every day of its absence. The title of "Erasmus in England" is taking, but we think something more interesting should have been made of the subject.

*The Shilling Magazine* is strongest this month "On the Worth of a Classical Education," but the last argument employed is rather destructive of all the others previously advanced—namely, that good education, after all, depends principally upon the qualities of the teacher. This is perfectly true, and we are convinced that if education were to be carried on in this country principally through the medium of science and the modern languages, teachers on those subjects would soon arise whose personal exertions would supply the admirers of that course of education with as many *ex post facto* arguments for its unapproachable excellence, independently of the genuine reasons, as long possession has furnished to those who have a monopoly in the teaching of Latin and Greek.

*Temple Bar* is better than an average number. The author of "The Turkish Bath" does not agree with the opinion expressed lately by a competent judge, that the bath is in a state of degeneracy in Turkey itself; but he does consider the establishment in Jermyn-street as very nearly, if not quite, an approach to Oriental perfection. "Preadamite Man" is becoming quite a household idea, but clever summaries, like this, of the evidence in his favour are still both necessary and instructive. "Your Vote and Interest" is very seasonable; and if all the streets of the world were like "Pennsylvania Avenue," Washington, they would certainly be "better for being burnt down."—*London Society* has illustrations this month by Miss K. Edwards, T. S. Seacombe, Paul Gray, and Ellen Edwards. There is an account of four Liverpool merchants, but not those famous ones who wrote to the Emperor Napoleon III.—*The Englishman's Magazine* hopes that the Wesleyans will one day be reabsorbed into the Established Church, and hopes that if "Sisterhoods" are established, they will be confined almost exclusively to secular work.

*The St. James's Magazine* takes us a pleasant trip up the Yangtze Kyang.—*The Churchman's Family Magazine* has the commencement of what bids fair to be an amusing tale, "I Wouldn't Marry a Curate!"—*The Leisure Hour*, a photographic illustration of the Temple of the Sun, Pekin; which, according to our latest accounts, must be now in the hands of the rebels.

*The Victoria Magazine* has a translation from

the French of Professor Edouard Laboulaye, on the civil and political status of the female sex, from the time of the Romans until the present day.

*The Anti-teapot Review* unfolds the mysteries of the Anti-teapot Society. It declares itself a decided protest against the unrealities and shams which characterize the nineteenth century, and quotes a passage from the programme of *The Church Review*, which it declares exactly expresses its own intentions.

*The Month*, in a paper on St. Gertrude, whose character, it justly observes, is much more difficult to appreciate in the North than in the South, pleads for the truth of ecstatic visions, modern miracles, and ascetic devotion. "Constance Sherwood" is brought to a conclusion. "The Ancient Faculty of Paris" is well described, but rather too much from a religious point of view.

We have received *The Sunday at Home, Our Own Fireside, The Day of Rest, The Boy's Own Magazine*, which has interesting pictures of the Otaria, or Sea Bear, in all its various postures of sitting, walking, and standing erect, reaching up to the face of its master, M. Lecomte. *The Boy's Monthly Magazine* has a seasonable article on "Hopping," a pastime for which many London maid-servants of the charwoman class leave their masters at this time of the year.

*The Co-operator: a Fortnightly Record of Co-operative Progress by Working Men*—(H. Pitman, Manchester)—reminds us that co-operation may now be said to have attained its majority, for it is twenty-one years since the "Equitable Pioneers" of Rochdale first saw twilight in Toad-lane. Seventeen out of the twenty-eight original pioneers are still living, and fourteen of them met to celebrate their corporate majority, and have been duly photographed. The journal has an interesting article on "Wholesale Co-operation," which explains the reason why such gentlemen as Mr. Neale, the Rev. F. D. Maurice, Kingsley, Ludlow, T. Hughes, Furnivall, J. Woodin, and Lloyd Jones failed in such an attempt some time ago. Many striking proofs of success in co-operative movements of various kinds are brought together. There is one lesson, we think, above all others to be learnt from the history of co-operation; which is, that it should never be attempted, just as political revolutions, excepting with almost a certain prospect of success. As a speculation, it will always fail. As the legitimate development of a want, it must succeed. The inspiration should come rather from below than above; and so those societies started by workmen themselves have endured. We cannot agree with "A Co-operative Curate" that there is, "practically, a conspiracy on the part of the nobility, clergy, and farmers to crush the poor," but we can easily fancy that a clergyman who has repudiated his Episcopal license will look forward "with positive glee" to opening a store in a barn; and "a shakedown in the same spacious apartment, which is indispensable for the security of the store," will remind the amateur tradesman of a bed in one of Don Quixote's hostelleries, and be more congenial to his enthusiasm than a snug parsonage in the unromantic flats of the neighbourhood of Wisbeach.

*The Ethnological Journal*. Nos. I., II., III., July, August, and September.—When Mr. Luke Burke first put forth his views on ethnology, or rather on anthropology, in a periodical of the same name, in the year 1848, they did not meet with a public in the least degree capable of appreciating their originality and boldness. Nor was this want of sympathy felt in England alone. The same year proved fatal to the Ethnological Society of Paris, the members of which have never assembled since that time, though it has not been formally dissolved. The place of man in the animate scale is still the subject in which Mr. Burke appears to take most interest. We understand that he has somewhat modified his views on that point. Whether he still thinks that the angel is the natural modification destined for our posterity, remains to be seen. The criticism in the July number on Mr. Wallace's memoir is, in our opinion, very just; and also on Sir John Lubbock's comparison of the principle of natural selection to the law of gravitation. Natural selection is no law at all, but only an ingenious attempt to account, in part, no doubt, justly, for some of the difficulties which stand in the way of the proofs of the great law of development of all nature, organic as well as inorganic, from one origin, by means of secondary causes. Too much is said in this journal of the discussions between two scientific societies.

# THE READER.

9 SEPTEMBER, 1865.

We trust the decision the British Association has just arrived at will end all their controversies.

*Astronomical Geology.* By R. G. M. Browne. (Bentley.)—This is another of those ephemeral productions, the object of which is not, as the author possibly believes himself, to test a really independent hypothesis by the very brief narrative of events contained in the first chapter of Genesis, but to set up that chapter as at once the most complete and the only correct account of what was once called the "Creation." The main theory is that the attractive power of the sun and moon upon the ocean "must be directly the production of a vast cone-shaped volume of water extending over one entire hemisphere, having its apex or deepest part immediately under the attracting luminary." The answer to this is, that were there no land to interfere with the action of the power of the sun and moon, such would be the case, but only for an instant; and that with the rotation of the earth this apex would constantly alter its position, and so equalize to a very great extent not what Mr. Browne calls the *depth*, but the *height* of the ocean over the globe. But Mr. Browne asserts that these volumes of water retain positions which are permanent relatively with the luminaries producing them, and are not carried round by the daily rotation of the earth. So that the ocean is the only stable part of the exterior of our planet, and the land is perpetually but slowly being dragged, now through deeper, now through shallower water, and now out of the water altogether. Consequently the Swiss valleys, for example, have been formed not by glaciers, or ice, or rivers, but by ocean currents, caused by these mountainous districts as they were approaching the sea's surface. Mr. Browne does not perceive that these districts were in no sense mountainous when *under* the sea, and that, if his theory be correct, all dry land would present much the same appearance. But we need not go further. The sailors of Columbus were afraid that they were sailing up hill, and would never be able to come down again; but it was reserved for "astronomical geology" to prove that because the celestial luminaries lift the ocean to a great height in certain parts of the globe, that therefore all the dry land must have gradually passed through a stationary ocean, and owed to that baptism its configuration and its various eras of animal and vegetable life.

*The Earth not a Globe*, by "Parallax." (Simpkin, Marshall, & Co.)—Immediately after perusing Mr. Browne, we stumbled upon "Parallax," who has also his theory that "the surface of all standing water must have a certain degree of convexity," if the earth is a globe. And as he proceeds to show by the most wonderful diagrams what the ocean would be, if it was convex, he cannot help coming to the conclusion, that as the sea is flat so also is the earth. Mr. Browne was so evidently serious, that we must confess for a short time we thought that even a gentleman who is convinced that the centre of the earth is at the geographical North Pole, and whose notion of the South Pole, is that it is a circumference, might possibly be so also. More especially as on turning at once to the very end of the book (our usual practice with works on religious science, whose sting is always in their tail), we found the author asking "How could Jesus have seen all the kingdoms of the world in a moment of time from a mountain, if the earth is a globe?" But when we found that a slight trigonometrical calculation will prove the sun to be much smaller than the earth, and only about 4,000 miles off, we had our doubts. They increased on discovering the Newtonian theory of astronomy to be an "absurd composition of truth and error." But the object of "reconcilers" is not to create a laugh, and to laugh we were fairly compelled when we read that to "the dogged atheist this question is of no more account than it is to an Ox . . . the result of whose accumulated experience is in no single respect better than the lowest animal in creation." In the latter part, the author becomes almost too jocose, but still we can strongly recommend this little book to Mr. Browne; we are sure he is too good-natured not to enjoy the reflexion of his own ideas in this inverting mirror.

*Chambers's Historical Questions.* By W. Chambers. (W. R. Chambers.)—This little book is designed to fulfil an important purpose in education—that of bringing clearly into view the leading facts which are supposed to be gained through a long course of instruction. The ques-

tions are well selected, and the answers for the most part judicious. We notice the only errors we have discovered. Mediæval history is commonly reckoned to end not "about 1450 A.D.," but in 1453 A.D., after the taking of Constantinople. Lucius Junius Brutus condemned both his sons to death, not one only. The *Clients* were by no means all "strangers," nor were they altogether a separate class from the *Plebs*. Virgil never wrote "facilis descensus Averno." "Circenses" is not "Circuses," but "Circenses Iudi," the games of the Circus. The *millarium aureum* was not "an ornamental structure on the Capitoline Hill," but consisted of a gilt pillar in the Forum; and the distances throughout the empire were not reckoned from the pillar, but from the gates of the city. We never heard that Titus carried off more than one seven-branched candlestick from the Temple. Zollverein does not signify *free toll*, but "The Customs-union."

*Diarrhaea and Cholera: their Origin, Proximate Cause, and Cure, through the Agency of the Nervous System, by Means of Ice.* By John Chapman, M.D., &c. (Triibner & Co.)—The application of ice to the spine is the remedy advocated; and we are enabled to state that in severe diarrhea it has been found perfectly efficacious. Dr. Chapman has only had one case of cholera, and that probably not Asiatic, in which to test it. There were all the worst symptoms of cholera, in the subduing of which it proved itself extremely effective. Mr. Williams, honorary surgeon in the Liverpool Infirmary for Children, also bears testimony to its efficacy. Mr. Williams applied an india-rubber bag, filled with ice, next to the skin along the central line of the back, letting it extend from the nape of the neck to the lower part of the hollow of the back, keeping it close to the back, and renewing it as long as sickness, cramps, coldness of the skin, and other symptoms of cholera, or any sign of collapse continued. Dr. Chapman, it, as is not unfrequent, feverish symptoms set in after the reaction is produced, applies warm-water bags, with the water at 110 deg. to 120 deg., to the back to remove it. This is the chief element of his treatment, and its very simplicity makes it readily available, even where medical aid cannot be promptly obtained. The treatise is reprinted from *The Medical Times* of July 29, with some important additions.

## PUBLICATIONS OF THE WEEK.

ALL About Margate and Herne Bay. Cr. 8vo, sd. Kent. 1s.  
 ARMSTRONG (Robert and Thomas). Class-book of English Literature; with Biographical Sketches, Critical Notices, and Illustrative Extracts. For the Use of Schools and Students. Cr. 8vo, pp. 404. *Nelson*. 3s.  
 BEAZELEY (A.). Tables of Tangential Angles and Multiples for Setting out Curves. In Case. *Lockwood*. 3s. 6d.  
 BERRY (Rev. Cornelius). Biographical Sketch of; to which is Subjoined the Sermon Preached on Occasion of his Death. By John Haydon. Sm. cr. 8vo, pp. 125. *Jackson, Walford, & Hodder*. Is. 6d.  
 BROWN. Engineering Facts and Figures for 1864. An Annual Register of Progress in Mechanical Engineering and Construction. Edited by Andrew Betts Brown. Cr. 8vo, pp. xl.—428. *Fullarton*. 6s.  
 BURNS (Robert). Complete Poetical Works; with a Memoir by William Gunning. The Text Carefully Printed, and Illustrated with Notes. With Portrait and Illustrations on Wood. Crown Edition. Fscp. 8vo, pp. clxiv.—523. *Nimmo*. 3s. 6d.  
 CALENDARUM Genealogicum Henry III. and Edward I. Edited by John Roberts. 2 Vols. Imp. 8vo. *Longmans*. 30s.  
 CHARLESWORTH (Maria Louisa). Ministering Children: a Tale dedicated to Childhood. 87th Thousand. Fscp. 8vo. *Seeleys*. 6s.  
 COLLINS (Mortimer). Who is the Heir? A Novel. 3 Vols. Post 8vo, pp. 872. *J. Maxwell*. 3ls. 6d.  
 DAME Dingle's Fairy Tales for Good Children. Illustrated. Sup. roy. 8vo. *Cassell*. 6s.  
 DAVIES (S. B.). Tables, Formulae, &c. Fscp. 8vo, cl. sd., pp. 32. *John Heywood* (Manchester). *Simpkin*. 6d.  
 DEMPSEY (G. Drysdale, C.E.). Rudimentary Treatise on the Drainage of Towns and Buildings: suggestive of Sanitary Regulations conducive to the Health of an Increasing Population. Revised and Greatly Extended: with Notices of the Metropolitan Drainage, Thames Embankment, and Water Supply Schemes. 3rd Edition. (Rudimentary Treatise, Vol. 30.) 12mo, cl. sd., pp. vi.—245. *Virtue*. 2s.  
 DON'S Parliamentary Companion. New Parliament. Thirty-third Year. The Seventh Parliament of Queen Victoria, elected July, 1865. 32mo, cl. sd., pp. 318. *Whitaker*. 4s. 6d.  
 ELLIOT (George). Romola. Illustrated Edition. Post 8vo, pp. viii.—535. *Smith & Elder*. 6s.  
 ELLISON (Rev. H. J., M.A.). Temperance Reformation Movement in the Church of England, its Principles and Progress: a Series of Papers, &c., partly Reprinted from "The Church of England Temperance Magazine." 2nd Edition. Cr. 8vo, cl. pp. 95. *Partridge*. 1s.  
 EYSTER (Wm. R., M.A.). Trapper's Pass; or, The Gold-Seeker's Daughter. (Bendle's American Library, No. 55.) Fscp. 8vo, sd., pp. 128. *Bendle*. 6d.  
 FISHER (Anthony L., M.D.). Game of Pallone, from its Origin to the Present Day, Historically Considered. With Illustrations. Imp. 8vo, sd., pp. viii.—17. *Bell & Daldy*. 3s. 6d.  
 GATTI (Mrs.). Florence and Her Doll. A Tale. New Edition. 18mo, pp. 180. *Tegg*. 1s.  
 GRINDON (Leo Hartley). Little Things of Nature considered especially in relation to the Divine Benevolence. Cr. 8vo, pp. 78. *Pitman*. 1s. 6d.  
 HIRST (Thomas). Autobiography of the Bible, and other Poems. Cr. 8vo. *Kent*. 5s.  
 HOOK. The Christian Taught by the Church's Services. Edited by the Very Rev. Walter Farquhar Hook, D.D. New Edition. Fscp. 8vo, pp. vi.—414. *Bell & Daldy*. 6s. 6d.  
 HOUGHTON (Rev. W., M.A., F.L.S.). Essay on the Canticles, or the Song of Songs. With a Translation of the Poem, and Short Explanatory Notes. 8vo, cl. sd., pp. 67. *Trübner*. 2s. 6d.  
 HUGHES (Samuel, C.E.). Treatise on Gas Works and the Practice of Manufacturing and Distributing Coal Gas. 2nd Edition, with Illustrations. Revised by W. Richards, C.E. (Rudimentary Series.) 12mo, cl. sd., pp. xv.—336. *Virtue*. 3s.  
 HURLBURT (J. Beaufort, M.A., LL.D.). Britain and her Colonies. 8vo, pp. xvi.—271. *Stanford*. 10s.  
 JEFFREYS (John Gwyn, F.R.S., F.G.S., &c.). British Conchology; or, an Account of the Mollusca which now inhabit the British Isles and the Surrounding Seas. Vol. 3. Comprising the remaining Conchifera, the Solenocoencha, and Gastropoda, as far as Littorina. With 8 Plates. Post 8vo, pp. 394. *Van Voorst*. 12s.  
 JOHN NOVILLE: Soldier, Sportsman, and Gentleman. A Novel. By a Centurion. 2 Vols. Post 8vo, pp. 604. *Tinsley*. 2ls.  
 JONES (Rev. C. A., M.A.), and Cheyne (C. H. H., M.A.). Algebraical Exercises progressively arranged. (Macmillan's School Class Books.) 18mo, pp. iv.—162. *Macmillan*. 2s. 6d.  
 KERR (Alphonse). Tour Round my Garden. Translated from the French. Revised and Edited by the Rev. J. G. Wood, M.A., F.L.S., &c. New Edition. With 117 Illustrations. Post 8vo, pp. xii.—332. *Warne*. 5s.  
 LEVY'S History of Rome. (Part 3.) Books 21, 22. With Notes by W. Brownrigg Smith, M.A., F.R.G.S. (Wenle's Classical Series.) 12mo, cl. sd., pp. 150. *Virtue*. 1s. 6d.  
 LOVE (Lady Catharine). First Lieutenant's Story. New Edition. Fscp. 8vo, pp. viii.—455. *Routledge*. 2s. 6d.  
 SIR ROLAND ASHTON. New Edition. Fscp. 8vo. *Routledge*. 2s. 6d.  
 MASSEY and Sons comprehensive Pudding Book, containing above One Thousand Recipes, connected solely with this branch of the Culinary Art: French Names, and a great number of perfectly new Puddings. Post 8vo, pp. iv.—196. Author. 3s. 6d.  
 MORRIS (Rev. F. O., B.A.). History of British Birds. Vol. 4. Containing 48 Coloured Engravings. Cr. 8vo, pp. 235. *Groombridge*. 7s. 6d.  
 PARKER (Joseph, D.D.). Wednesday Evenings at Cavendish Chapel. Homiletic Hints. Cr. 8vo, pp. vi.—116. *Pitman*. 2s.  
 PIKE (J. G.). Persuasives to Early Piety. New Edition. 18mo, pp. 190. *Religious Tract Society*. 1s.  
 PRIDEAUX (Mrs. F.). Claudia. Fscp. 8vo. *Smith & Elder*. 5s.  
 SEWELL (Mrs.). Homely Ballads and Stories in Verse. In Eighteen Numbers. 18mo, cl. sd. *Smith & Elder*. Each 2d.  
 SHORT French Grammar (A.), for the Use of Marlborough College. 4th Edition. Fscp. 8vo, cl. sd., pp. 140. *Clay*. 2s. 6d.  
 SHORT Meditation (A.) on the Moral Glory of the Lord Jesus Christ. By J. G. B. Sm. cr. 8vo, pp. 65. *Broom*. 1s. 6d.  
 SMITH (Barnard, M.A.). Key to School Class Book of Arithmetic. Part 3. (Macmillan's School Class Books.) 18mo, pp. 95. *Macmillan*. 2s. 6d.  
 SMITH (George, LL.D., F.A.S.) Book of Prophecy: Comprising a Proof of the Plenary Inspiration of Holy Scripture; a Classified Arrangement of Prophecies Already Fulfilled, or in Course of Fulfilment; and Prophecy as "the Testimony of Jesus," considered in its Relation to the Faith of the Church and the Progress of Scepticism. Roy. 12mo, pp. xvi.—673. *Longmans*. 10s.  
 STANDING Orders (The) of the Lords and Commons relative to Private Bills; with Appendix, containing Table of Fees charged at the House of Commons, Standing Orders of the House of Commons relative to Public Matters, Rules for the Practice and Procedure of the Referees, and other information respecting the Proceedings Necessary to be Taken by the Promoters and Opponents of Bills; and with Copious Indexes. For Session 1866. 12mo, pp. 260. *Office*. 5s.  
 STEWART (E. M.). Not a Changeling: or, Revenge and Retribution. Cr. 8vo, bds., pp. 395. *Douglas*. 2s. 6d.  
 SPARE WELL, SPEND WELL; or, the Adventures of a Five-Franc Piece. 18mo, pp. 93. *Nelson*. 1s.  
 TALES UNCLE TOLD. 8vo, sd. *Longmans*. 2s. 6d.  
 THOMSON (James). Poetical Works. Edited, with a Memoir, by Robert Bell. (Bell's English Poets Re-issue.) Vol. 2. Fscp. 8vo. *Griffin*. 1s.; cl. 1s. 6d.  
 WALCOTT (Mackenzie E. C., B.D.). Memorials, Archaeological and Historical, of Chester, Manchester, St. Asaph, and Bangor. 8vo, sd., pp. iv.—47. *Phillipson & Golder* (Chester). *Simpkin*. 2s.  
 WALMSLEY (John). Plane Trigonometry and Logarithms. For Schools and Private Students. 12mo, pp. viii.—182. *Hodgson & Son*. 3s. 6d.  
 WEBER'S School Singing Book, containing Thirty-three Two-Part Songs, of various Origin and Character: with an *ad libitum* Accompaniment for the Piano or Harmonium, which, in most of the Pieces, may also be sung by Tenor and Bass Voices, so as to change them into Four-Part Songs. Proceeded by Instructive Elementary Exercises. Arranged and Composed by F. Weber. Roy. 8vo, sd., pp. 24. *Simpkin*. 2s.  
 WETHERELL (Miss). Ellen Montgomery's Book-shelf. Carl Krinken; or, the Christmas Stocking. By the Authors of the "Wide, Wide World," &c., &c. With Coloured Illustrations. Fscp. 8vo, pp. 153. *Warne*. 1s.  
 WOOD (Rev. J. G.). Illustrated Natural History. New Edition. Vol. I. Roy. 8vo. *Routledge*. 1s.  
 WOODWARD (B. B., F.S.A.). First Lessons in the Evidences of Christianity. 2nd Edition. 18mo, cl. sd., pp. viii.—104. *Jackson, Walford, & Hodder*. 1s.

## OBITUARY.

OUR obituary this week contains the name of Mr. Appold, whose centrifugal pumps formed striking features at both of our International Exhibitions of 1851 and 1862. He was a great amateur mechanician, and his house is a monument of his skill and ingenuity. There everything that could be made so is automatic and self-acting. The doors open as you approach them, and close after you; water comes unbidden into the basins; when the gas is lighted the shutters close; a self-acting thermometer prevents the temperature rising or falling above or below certain fixed points; and the air supplied for ventilation is both washed to cool and screened to cleanse it from blacks. Even the gates of the stable-yard open of themselves as one drives through, and close again without slamming. Mr. Appold was a dresser of furs by a secret process, which he practised successfully for many years, and which secured him a practical monopoly of the trade; and he always maintained that this was a far more effectual way of working an invention than any patent. Amongst other benefits conferred by him on science is the paying-out apparatus used in laying submarine telegraphs, which was mainly his contrivance. He also shares, with Mr. Hawkshaw, the credit of first

# THE READER.

9 SEPTEMBER, 1865.

suggesting the use of syphons for draining off the flood waters in the fen country, when the embankment there gave way some time ago. He died at Clifton, on the 31st ult.

MR. WILLIAM HENRY ADAMS, Chief Justice of Hong-Kong, and formerly M.P. for Boston, died on the 29th ult., at the residence of his son, Captain Adams, Plas Llyssyn, Carno, Montgomeryshire, in his fifty-sixth year. The deceased, who was the son of Mr. Thomas Adams, of Normancross, Huntingdonshire, was born in 1809, and while still a boy entered a printing-office as a compositor. He employed his leisure hours in reading for the law; for some years he was the law reporter of *The Morning Herald*, and was called to the bar of the Middle Temple in 1843. He was subsequently an auditor of the Poor-law accounts, and successfully contested Boston in 1857, which constituency he represented till 1859, when he received the appointment of Attorney-General of Hong-Kong. In the previous year he was appointed to the recordership of Derby.

We have to announce the death of Sir William Rowan Hamilton, Astronomer-Royal for Ireland, and Professor of Astronomy in Trinity College, Dublin, on Monday last. Sir William was born in 1805, at Dublin, and was consequently a sexagenarian. He was a valued contributor on mathematical and physical subjects to the "Transactions of the Philosophical Society."

At the last meeting of the French Academy, the President announced the death of one of his *confrères*, M. Duperrey, whose courageous deeds in the service of his country as a sailor, have only been excelled by his services to science in discoveries he has made in terrestrial magnetism.

## MISCELLANEA.

THE British Association has met at Birmingham, and its first business has been to refuse its recognition to the science of Anthropology. This we regret, not on account of Anthropology, which can take very good care of itself, but for the impression it will create abroad as to the sectarian disposition of English men of science. The motion of Professor Phillips, whilst it explains the reason of the decision, goes, however, much further. It is settled that the doors of the Association are closed to all new-comers. The circle its energies are to fill is complete. There is only one thing left—the title should be altered to that of "The Association of Exact, or Physical Science," and no further misunderstanding or disappointment could possibly occur.

PALÆONTOLOGISTS will be gratified by the appearance of the new volume (the fourteenth) of the "Smithsonian Contributions to Knowledge." The two last articles of the volume—namely, "The Palæontology of the Upper Missouri," and "The Cretaceous Reptiles of the United States," are abundantly illustrated by handsome lithographic plates. The remains of the huge reptile the "Hadrosaurus" as here depicted, are very remarkable. An anecdote for any collection of curiosities of natural history may be gleaned from the annual report of the Regents of the Smithsonian Institution. The last article in the volume is by M. Figanierre é Morao, the Portuguese Minister at Washington who tells of his purchasing a house near Charleston in Maryland, how he suffered from a remarkable accumulation of bats he found there (from 11,000 to 12,000) and how he slew them with bats of another description, cricket bats. The editor of the volume concludes with a note upon the parasites which infest bats, and says: "The entrance of a bat with its precious burden, into the open window of a farmhouse, is the solution of that frequently propounded question of the despairing housewife "Where can the bugs come from?"

THE eighth volume, just issued by Messrs. Longman and Co., completes the new edition of Mr. Merivale's "History of the Romans under the Empire," and leaves off at the reign of Commodus, where Gibbon begins. Let us hope that the same firm will give us an edition of "The Decline and Fall of the Roman Empire," to match this cheap and elegant issue of Mr. Merivale's history of the Empire.

MR. O'SHEA has compiled a most useful "Guide to Spain," an alphabetical gazetteer which never loses sight of the traveller's requirements, and to which he has prefixed, by way of introduction, a great body of general

and useful information. It is published by Messrs. Longman and Co.

MR. T. MITCHELL, Attaché to the British Embassy to Russia, gives us an entirely new "Handbook for Poland, Russia, and Finland," which is issued in Mr. Murray's Series. This had become necessary; for Mr. Murray's former "Handbook" of those countries was compiled before the Crimean War and the completion of the railroad from St. Petersburg to Moscow; besides which, the present Czar has introduced many internal changes, which tend greatly to facilitate the traveller's progress through his dominions.

MESSRS. BLACKWOOD and SONS have the following books in the press: "The History of Scotland, from Agricola's Invasion to the Revolution of 1688," by John Hill Burton, author of "The Scot Abroad," &c.;—"The Operations of War Explained and Illustrated," by Colonel E. B. Hamley, R.A., late Professor of Military History, Strategy, and Tactics at the Staff College;—"The Handy Horse-Book; or, Practical Instructions on Riding, Driving, and the General Care and Management of Horses," by a Cavalry Officer;—"Contributions to Natural History, chiefly in relation to the Food of the People," by a Rural D.D., containing "Hippophagy—its Progress and Utility," "Mycophagy;" "Salmon and Pisciculture;" "Oyster and Mussel Culture;" "Leech and Pearl Culture;" "Horses, Ancient and Modern;" and "Acclimatization of Animals."—"Geology for General Readers," a series of popular sketches in geology and paleontology, by David Page, F.R.S.E., F.G.S., of which the following is the list of contents: "The Crust we dwell upon;" "Waste and Reconstruction;" "Vulcanism, its Nature and Function;" "The Primary Periods;" "Fossils, their Nature and Arrangement;" "The Old Red Sandstone;" "Coal and Coal Formations;" "The Old Coal-Measures;" "The Secondary Ages;" "Tertiary Times;" "Ice, its Forms and Functions;" "The Glacial or Ice Epoch;" "Recent Formations;" "Man's Place in the Geological Record;" "Order and Succession of Life;" and "What of the Future?"—"Outlines of Modern Geography, a Book for Beginners," by the Rev. Alexander Mackay, A.M., F.R.G.S., author of "A Manual of Modern Geography," &c.;—"Dictionary of British-Indian Dates: Being a Compendium of all the Dates essential to the Study of the History of British Rule in India, Legal, Historical, and Biographical;" intended for students about to face examinations for the Indian services; and "The Iliad of Homer, translated into English verse in the Spenserian stanza by Philip Stanhope Worsley, M.A., uniform with the "Odyssey," translated by the same.

MESSRS. ALLEN AND CO. issue a second edition of "The Channel Islands," by Professor Ansted and Dr. Latham, with illustrations on wood by Messrs. Vinetelly, Loudon, Nicholls, and Hart, from drawings by Paul G. Naftel, elegantly printed on tinted paper. This beautiful volume will long continue to be the chief topographical, physical, and historical authority on all matters connected with the Channel Islands, and is quite a type of what topographical writing should be.

MR. NEWBY announces "Common Sense," by the author of "Kate Kennedy," "Wondrous Strange," &c.;—"It May be True," by Mrs. Wood;—"The Naval Lieutenant," by C. F. Armstrong;—"All About the Marsdens," by Mrs. Waller;—"An Old Man's Secret," by Frank Trollope;—"Maggie Lynne," by Alton Clyde;—"A Troubled Stream," by the author of "The Cliffords of Oakley";—"Adrienne Hope," by Matilda M. Hayes;—"Treason at Home," by Mrs. Greenough;—"The Adventures of a Serf Wife among the Mines of Siberia";—"The Rector's Homestead."

MESSRS. FREDERICK WARNE and CO. have just commenced a new series of shilling railway volumes, by reprinting four American novels by the author of "The Sutherlands" and "Rutledge," those two forming the first and second volumes of "Warne's Companion Library," and "Christine, or St. Philip's," and "Frank Warington" the third and fourth. These tales are enjoying an immense popularity in America. The same publishers have just ready two capital seaside books, the first of their "Household Books: Country and Seaside Library"—"Common Shells of the Sea-Shore," by the Rev. J. G. Wood, with plates by Sowerby; and "Common Sea-Weeds," by Mrs. L. Lane Clarke, the plates to which are printed in colours. Both of these shilling manuals will be most acceptable to young people during their stay at the seaside.

MESSRS. MACNIVEN and CAMERON, of Edinburgh, have brought out a new colour in paper, which they call "The Seville." It has a dark orange tint, and seems particularly well suited for fly-leaves to old books when re-bound.

THE *Gazette des Etrangers* announces that the MS. of the second volume of "L'Histoire de Jules César" is being put in type at the Imperial Printing-office, and that nearly ten sheets are ready. That amount scarcely makes up one-half of the volume, which will not be published before the beginning of next year.

M. PLOM has just published the eighteenth volume of the Napoleon Correspondence.

THE eighth volume of Varnhagen's Diary has just appeared at Zurich. Its chief interest is the picture it draws of the subservienty of Prussia to Austria and Russia fourteen years ago.

MR. BURLINGAME, says an American paper, brings an interesting gift from China to Mr. Longfellow. It seems that Mr. Wade, of the British Embassy at Pekin, who is a skilful Chinese scholar, made a close translation of Longfellow's "Psalm of Life," which was then inscribed, as the manner of the country favours, on the doorposts of his house. There the calm, pure wisdom and beauty of its sentences greatly impressed a learned dignitary poet of the empire, who thereupon put it into pure Chinese poetical form of the last polish, and so writing it out with his own hand on a beautiful fan, sent it as a present to his brother bard at Cambridge. It is pleasant for all of us admirers of that charming poem to know that thousands of Pekin folks stop to read, and admire it too, as they pass Mr. Wade's door.

WE are informed that the Rev. Andrew R. Bonar, of Canongate Church, Edinburgh, author of the "Poets and Poetry of Scotland," and other works, is also a candidate for the Chair of Rhetoric at the University of Edinburgh.

AUGUSTSSOHN, the *nom de plume* of the youngest son of Augustus von Kotzebue, the author of "The Stranger," has written a comedy which has achieved considerable success at the Dresden Court Theatre, and which, it is said, will be brought out next season in London, under the title of "A Dangerous Friend."

THE Rev. Robert Payne Smith, M.A., the new Regius Professor of Divinity in the University of Oxford, was educated at Pembroke College, where he graduated in 1841, taking a second class in classics. In 1843 he obtained the Pusey and Ellerton Hebrew Scholarship. In 1857 he was appointed sub-librarian of the Bodleian Library, and Bampton Lecturer in 1859. In 1862 he published "Authenticity and Messianic Interpretation of Isaiah."

THE *Europa*, No. 35, contains "Recollections of Meyerbeer;" "Abd-el-Kader;" and "Die Zeitdauer der Erdperioden;"—the *Ausland*, No. 33, "New York Fire Arms;" "Bookselling and Publishing in Ancient Greece and Rome;" "Die Pfahlbauten Oberitaliens;" "Fortdauer der Räubereien in Australien;" and "Arminius, the first German Ironclad;"—the *Blätter für literarische Unterhaltung*, No. 32, a review of Lyell's "Antiquity of Man;"—and the *Göttingen Gelehrten Anzeigen*, No. 30, Lightfoot's "St. Paul's Epistle to the Galatians."

AMONGST recent American publications we notice a quarto brochure of sixty-seven pages, entitled "Andreana; containing Trial, Execution, &c., of Major John André;"—"The way to out-do England without fighting her: being Letters on the Paper, Iron, Farming, Railroad, and Currency Questions," by H. C. Carey;—"Home Ballads by our Home Poets," with illustrations by Darley;—"President Lincoln's Words: a Selection from the Speeches, &c., of Abraham Lincoln;"—"Letters from the Prisons and Prison Ships of the Revolution," by H. R. Stiles; and "The Trials for Treason at Indianapolis, disclosing plans for establishing a North-Western Confederacy."

A VOLUME of 458 pages has just appeared at Boston, U.S., written by Dr. Frederick Henry Hedge, under the title of "Reason in Religion," which is likely to excite considerable attention on both sides of the Atlantic, from the originality of the writer's views. It is the first American work of any completeness which attempts to apply the principles of transcendental philosophy to religion on conservative grounds.

THE Italian papers mention the following additions to Dante Literature: Ancona, A., la Beatrice di Dante. Studio (49 p. 4.) Pisa. Bibliografia Dantesca, ossia Catalogo delle Edizioni, Tradizioni e Comenti della Divina Commedia in Continuazione dell' Opera del Visconte Colombe De Batines per Opera di Carlo Gar-

## THE READER.

9 SEPTEMBER, 1865.

giolli e Gaetano Ghivizzani, aggiuntovi la Serie delle Vite di Dante con una breve Notizia dei Biografi e un Indice alfabetico di tutti i Nomi degli Autori tanto citati nell' Opera del Batines che nella Continuazione Bologna ;—Codici di Dante Alighieri in Venezia, Illustrazioni storico - letterarie di Niccolò Barozzi, Rinaldo Fulin e Francesco Gregoretti pubblicati a Spese della Città di Venezia per celebrare il Sesto Centenario della Nascita di Dante, Venezia ;—Dante e Padova : Studii storici critici di Andrea Gloria, Enrico Salvagnini, Giuseppe della Vedova, Pietro Selvatico, Emilio Morpurgo, Giuseppe de Leva, Giacomo Zanella, Antonio Tolomei, Domenico Barbaran. Pubblicati per il Sesto Centenario di Dante Alighieri. Padova ;—Gualandi, Ang., Giacomo Dalla Lana Bolognese, primo commentatore della Divina Commedia di Dante Alighieri; notizie biografiche con documenti ;—and Perez, Franc., la Beatrice Svelata. Preparazione all' Intelligenza di tutte le Opere di Dante. Palermo.

M. PLACE, formerly French Consul at Mossoul, who devoted five years to excavations and other researches on the site of ancient Nineveh, is printing, at the Imprimerie Impériale, a magnificent work, extensively illustrated with engravings, embodying the result of those labours.

THE Société des Bibliophiles Belges is about to publish a version of the romance of *Perceval le Gallois*, by Christian de Troyes, from a MS. in the public library of that city. The first volume is just ready ; the complete work will form four handsome octavo volumes.

THE Paris Correspondent of the *Morning Post* serves up a *salmi* of the *Athenaeum canard*, now some weeks old, of the 50<sup>th</sup>. brigand story. The only difference is that the correspondent of the *Post* turns the "artist" of the *Athenaeum* into one of the Diddler family.

THE German Polar Expedition has come to grief. The Queen of the Isles steamer, with the expedition on board, left Hamburg on the 30th ult., and on the following day the engine broke down, and with it the expedition, for this year at least.

MAHMUD BEY, astronomer to the Viceroy of Egypt, has issued an interesting treatise as to the date of the building of the Pyramids, tracing their connexion with Sirius, the Dogstar. The late Viceroy, Said Pasha, ordered him to work out this problem. He found the exact measurement of the largest to be 231 metres at the base, and 146'40 from the ground to the apex. Hence follows, that the sides are at an angle 51° 45'. Mahmud Bey found that the angles of the other three pyramids, near Memphis, were on an average inclination of 52°. The fact that the sides of these monuments are placed exactly true to the four points of the compass, seemed to point to some connexion with the stars, and Mahmud Bey found Sirius sends his rays nearly vertically upon the south side, when passing the meridian of Ghizeh. He then found on calculating back the exact positions the star occupied in past centuries, that the rays of Sirius were exactly vertical to the south side of the Great Pyramid, 3,300 B.C. Sirius was dedicated to the god Sothis or Toth Anubis, and hence the astronomer deduces that the pyramids were built about 3,300 B.C.

THE Earl of Cawdor, according to the *Inverness Courier*, last week shot a very curiously-coloured grouse, and has sent it to Mr. Macleay, bird-stuffer, Inverness, to be preserved. It is of a uniform pale ash colour, nearly white, and when killed was plump and in fine healthy condition. Mr. Hanbury, Ord, has also sent Mr. Macleay a strangely-marked grouse, the prevailing colour of which is a faded yellow, a few of the feathers being a light brown, the wings and tail ash-coloured. Two others have been sent by Mr. D. H. Mackenzie, of Poolewe, of a peculiarly mottled grey colour.

THE members of the Share Clubs associated to obtain shares in the Crystal Palace assembled in large numbers at the Palace on Sunday afternoon. These clubs, it may be remembered, with their friends, have for some years past received a gratuitous admission to the palace and gardens on one Sunday afternoon each summer. The demonstration was organized by the Sunday League, respecting whose objects and principles Mr. Baxter Langley delivered an address. Besides the address there was a performance of sacred pieces on the organ. The visitors were numerous, and conducted themselves in such a manner as to leave little doubt of the ultimate success of the movement which the Sunday League has in view.

"SEA air," Dr. Jeaffreson remarks, in his address at the British Medical Association, "is by

no means advisable in some cases, and those are pretty numerous. I would especially cite phthisis, hepatic congestion with over-secretion of bile, and all maladies complicated with febrile disturbance. On the subject of sea-bathing, I feel bound to say that, within my own experience, it is doubtful whether the great good which comes out of it, when judiciously advised and carried out, is not more than counterbalanced by the mischief accruing from it under its reckless, unadvised use in the comparatively healthy, or its careless use by invalids. Many cases are benefited by sea air in which sea bathing is utterly inadmissible ; and no year passes in which I have not seen deplorable instances of more or less severe mischief coming out of cold bathing, whether in fresh or in sea water. An absurd prejudice pervades the public mind that sea water can do no harm. Truly it is less prejudicial than fresh water : but its beneficial action, whether in health or disease, depends entirely upon the same principle—namely, that of shock and reaction ; and if carried on too long to admit of the latter, will induce, if by slower, yet by no less certain degrees, the same form of mischief. I generally premise the cold sea-bath by the use of tepid baths gradually lowered in temperature."

DESPITE our Scotch-English, American-English, and all the other varieties of the "high polite" style, the French beat us by long chalks in the matter of fine writing. Talking of the Cherbourg Fêtes, the Paris penny-a-liner goes into such raptures at the *tout ensemble* of steamers, ships' boats, and pleasure skiffs, that he winds up with "*Enfin c'est un spectacle d'un grandiose pittoresque impossible à décrire.*" Impossible to translate, at any rate. Has any one tried, by the way, the effect of half a page of Victor Hugo's best writing, done into moderately literal English ? It reads so well in French, and fine writing is so catching, that we read on without thinking what it means. But when you have it there before you in black and white in the vulgar tongue, there is no mistaking such unutterable bombast. You see it as it is, and value it accordingly. But are you quite right, after all ? Is it not rather true that this style suits the French people as well as it suits their language, and that they manage to get as much truth out of it as we do out of our style, so much more severe and (in its way) pretentious ? The truth is, the French, in their popular books, chiefly give results and the deductions therefrom. The subtle French mind supplies the suppressed premises, and the consequence is that we have a plan of reasoning rather Oriental than Western. A case in point occurs in a paper before us : the object is to advertise the aquaria in the *Galerie Frascati*. An Englishman would (according to his means and his whim) have advertised in large type, or repeated his advertisement down half a column, or put in at the corner of the sheet some ingenious quip, in the style of those by which Benson recommends his incomparable watches. But the Frenchman, under the head of "*Chronique*" gives us a complete *histoire*, guaranteed by the author's name. He meets a friend on the boulevard, sees that he is in the dumps, and at last makes him confess that next day is the *fête* of a handsome young widow of his acquaintance, and that he really does not know what to give her. "She is so *spirituelle*, you know, I shall ruin myself for ever if I send anything commonplace." We walked on ; I led him to the *galeries*—that *patrie privilégiée des cadeaux et des étrennes*. "There's the thing for your money," said I, shewing him *quelque chose de délicat, de lumineux, et de vivant*; and so he buys an aquarium ; is sent for to give advice about how to feed the *petites bêtes* ; and plays his cards so well, that I verily believe I have unwittingly added one more to the month's list of marriages. Here it is the conclusion which is suppressed, rather than the premises ; but the whole thing is singularly neat. The only objection to it is, that, as it takes up full two columns, it must be somewhat costly.

THE Emperor Napoleon has visited the Exhibition of Industrial Fine Arts at Paris, and has offered his magnificent collection of armour, consisting of sixty breastplates and a great number of panoplies, as an addition to the exhibition.

WE have seen the first sheet of Mr. Jesse's new book, "Memoirs of George the Third and of his Times," which promises to be very entertaining. The author has had access to many unpublished documents laid by among the archives of noble houses, and he has made free use of them, gathering up many anecdotes that will be new to the generality of readers. The

work will be published by Messrs. Tinsley Brothers, in three volumes.

THE following passage in the first article of a recent number of *The Fortnightly Review* seemed to promise a *bonne bouche* to the admirers of Mr. Carlyle : "The calm judgment of posterity, especially if assisted by the pen of Mr. Carlyle (who is said to hold that Washington stands too high, and who, if I am rightly informed, contemplates lowering his pedestal), will, I think, reverse the verdict of Mr. Everett's lecture, &c." It is a pity to dispel an allusion so pleasing, but our readers may rest assured, on the best authority, that Mr. Carlyle has no intention of making Washington the subject of his writing.

THE letters of King George III. to Lord North, edited by Mr. Donne, the Examiner of Plays in the Lord Chamberlain's Office, to be published by Murray, will soon, as we are informed, be in the hands of the printer.

M. RENAN's "Les Apôtres" will be ready in the course of next month, and his "St. Paul" a month later.

## CORRESPONDENCE.

### THE SEPULCHRE OF CHRIST.

To the Editor of THE READER.

Sir,—With your permission, I continue the narrative of the Holy Sepulchre which I left incomplete. In doing so I take almost solely the plain authentic annals and dates of the Patriarch Eutychius, and the history of the Crusades, by William Archbishop of Tyre, and translating the original words closely and correctly, as I believe, follow them boldly to their logical conclusion. I will add here, in order to avoid misapprehension, that when I speak of the Church of the Holy Sepulchre I call it by its historical name the *Anastasis* (the smaller *μαρτύριον*, built on the actual *site* of the Burial and the Resurrection.) The other church I call the *Basilica* (the *μέγα μαρτύριον*, built in honour of the Cross and the Resurrection, and so called the Church of the Resurrection.) And to these two churches of Constantine, which are the real subjects for consideration, I principally confine myself. Not that these two churches stood alone on Mount Moriah, for, between the time of Constantine and the restoration of the Christian buildings damaged by Chosroes, two other churches were built—St. Mary's, to the south, and that over the spot of the Crucifixion, named Golgotha, within the court. But the site of the Sepulchre is our point ; and it will make it all the clearer if we keep our eye fixed steadily upon that and the Basilica alone.

Before I proceed with my narrative, I would linger a moment in admiration of the range of buildings erected by Constantine, when he recovered the Sepulchre. I can conceive nothing upon earth, for situation, interest, and beauty combined, able to approach it. First came the church round the Sepulchre itself, highly ornamented in every way—*ξαφέτος κίστη, κύστη τε πλειστη*—decked with columns of matchless value, which exist at this moment. Its symmetry and grace externally can be imagined if we assume the building to be represented by that of the Dome of the Rock.

Attached to the eastern entrance to this church was an open court, as wide and as long as the diameter of the church ; with corridors on three of its sides.

A grand Basilica, of the same width as the court, was built on to its eastern wall ; the interior blazing with gold and marble and mosaics, in form and magnificence somewhat like that of St. Paul's in Rome.

Nor can anything be conceived more touching than the public services in this primitive but gorgeous cathedral. Ten years after its completion, before the gold had become dim, St. Cyril was the preacher, and his lectures have come down to us, exceedingly simple, short, condensed, requiring but little change to be fitted for a modern audience. Before Easter it appears he lectured in the Basilica, the wide western doors of which opened into the court ; so that, while preaching, he could point to a gentle swelling in its marble floor to the left : it was Golgotha ; while, in full view, still farther west, through the eastern door of the round church, rose up in its centre the Holy Rock, the actual *Sepulchre of Christ*. From the pulpit of the Basilica he spoke of the Cross ; and on the day appointed he led his hearers into the open court, and dwelt on the Crucifixion itself on the very spot of Golgotha, "Εν φυῖν, διὰ τὸν ἵντων σταυρωθέντα, συγκεκριμένθα," said he, "on which we are now assembled." (L. iv.) "And

# THE READER.

9 SEPTEMBER, 1865.

after Easter ye shall assemble in the place where He rose from the dead, the Anastasis; and there, God willing, ye shall hear lectures of another kind." (L. xviii. 33.)

Another touch of reality brings the very bounds before us within which Jesus was buried "a garden, and in the garden a sepulchre hewn in stone." "For," said the preacher, three or four hundred years after the Crucifixion, "the space around the tomb was a garden once; and though the greatest part of it is adorned with princely gifts and so covered over, some tokens and remnants of it, as you see, still exist." κῆπος ἦν πρότερον, καὶ τὰ σύμβολα τούτου μένει καὶ τὰ λείψαντα. (L. xiv.)

Once more. It is quite clear that when Jerusalem was destroyed, the whole eastern portion of the city—walls, towers, Temple, and all—was levelled with the ground, so that "no one passing by could believe that it had ever been inhabited" (Jos. B. vii. i.) But though this was the case, in the time of Eusebius, who was nearly contemporary with Cyril, the ground had been stirred, and blocks of the fine work of the Temple lay upon the surface. So that the holy Bishop might have stood at the south entrance of the Anastasis, the emblem of the new Covenant, and looking south might have pointed with emotion to the site of the desolated emblem of that old Covenant which had passed away for ever.

Such was the state of the Haram in the days of St. Cyril (350 A.D.), when it was kept and guarded as jealously as the precincts of an English cathedral. What was it soon after 1010 A.D.? It is fully described by William of Tyre, who says that at each angle of its boundary wall, and at each of its western gates leading into the city, was a lofty tower, from the summit of which Saracen priests called the people to prayer. At one end of the Haram, in its declivity to the south, stands the Mosque of Omar, called the Temple of the Lord, or of Solomon, erected on the actual spot of the sacred Temple of old. "In declivo ejus quod ad austrum respicit." Again, in order to fix the locality by repetition, "Ab austro domum habet regiam, quae vulgari appellatione Templum Salomonis appellatur." In the middle of the Haram, he goes on, there is a raised platform, and upon it an octagonal temple, with the rock and the cave within it, as we see it now (Gesta Dei, I. viii. 3.)

What caused this change? The circumstances were these. From the time of St. Cyril till the irruption of Chosroes, in 615 A.D., all appears to have gone well with these churches in Jerusalem. Then, however, they were barbarously fired by the Persians, and so damaged as to require partial restoration; and though they were restored, according to William of Tyre (c. i. i.) to their former condition as to shape and material—in priorem statum—it is not surprising that columns, and capitals, and other details of the existing Anastasis should now be wanting, as they are, in that accuracy of composition which they had at the first.

Shortly after that, in 637 A.D., came the conquest of Jerusalem by Omar. But he was tolerant and upright, and left every Christian Church untouched, engaging besides to build only one single Mahometan mosque in the city. But that Mosque was to be the holiest, next to that of Mecca, in the world. It was to be built on the site of the Temple of Solomon, within the ναὸς of which was the sacred stone, the Petra, the pillar of Jacob—quam appellavit Jacobus Petram celi, Israelite autem Sanctum sanctorum. Out of the heap of stones on which Jacob slept, his head had rested on that chosen shaft; and while sleeping he had seen the great vision, and he said, "This is none other but the House of God!" And he called the place Bethel. And he took the stone—for, like the black stone at Mecca, it was small and moveable—and set it up and anointed it. And now Omar sought it out and recovered it, and built a mosque on the spot, and placed the stone behind it. Struxit ergo Omar Templum, cuius in parte posteriore Petram statuit. (Eutych. Ann.)

In 685 A.D. two rival claimants contended for the Caliphate. Ebn Zobair had this popular advantage, that he had got possession of Mecca, and pilgrims without number flocked to the Caaba, to kiss the black stone and claim its blessing. This wonder-working treasure is a small stone set in silver and imbedded in the temple wall, just high enough for the faithful to kiss. It had been turned from white to black, it was said, through the sins of the people, and was of such virtue that, kissed by the pilgrim in faith, it would bear witness in his favour at the day of judgment, when it will be gifted with sight and speech.

But the Caliph de jure, Merwan Abdil Malec

(685—705 A.D.) dwelt at Damascus; and he sent to Jerusalem, and enlarged the mosque built by Omar, till he could move the holy Petra which had been placed by his predecessor behind the Temple, and convey it within. Templum auxit donec Petram in ipsum inferret (Eutych. Ann.), and ordered pilgrimages to be made to Jerusalem, and not to Mecca.

It was at this precise period, 697 A.D., that Arculfus visited Jerusalem, and saw this vast Saracen building in its rudeness, and thought it large enough to hold 3,000 people. His account, together with that of his interpreter, Bede (*de locis sanctis*), is of great value and interest, for it tells us of the long-lost bridge, of which there are remnants still existing, and of the exact locality of the Temple. "In the lower part of the city, where the Temple, erected near the eastern side of the Haram wall, had been joined on to the city itself by means of a way-bridge for crossing over, there the Saracens have now built quadratam domum, a quadrangular mosque." In inferiori parte urbis ubi Templum in vicinia muri ab oriente locatum ipsique urbi transitum pervio ponte mediante fuerat conjunctum, nunc Saraceni, &c.

The son of Merwan, Walid Abdil Malec (705—715 A.D.) did greater things still for that mosque. It was the only mosque in Jerusalem; so he raised it, and adorned it with fresco; and placing the Petra, the pillar of Jacob, in the middle of the "Chapel of the Holy Stone," encircled it with an edifice cased with marble, and covered the chapel itself with a splendid dome; after which he commanded pilgrimages to be made to the Petra itself, the virtues of which, being none other than the gate of heaven, were even greater than those of the black stone of Mecca.

Such was the great Saracen building, El Aksa, with its Holy Chapel within, erected on the site of the Inner Temple of the Jews, at the southwest angle of the Haram, face to face with the Anastasis, or Church of the Holy Sepulchre. It was a dangerous neighbourhood for the latter. Its safety, however, had been secured by a solemn covenant with Omar, who had sworn besides, and signed it with his autograph, that no other mosque besides that should be built in Jerusalem. "Write," said the Christian Patriarch, "Ne intra Hierosolyma extruatur præter illud adoratorium Mohammedicum." And Omar wrote. And the covenant was kept for more than 300 years, till the time of Eutychius, in 958 A.D., when "the Mahometans," says the anarchist, "tempore hoc nostro, broke the covenant of Omar, and seized half the vestibule of the round Church of Constantine; and there, on the steps where Omar had prayed, at the eastern entrance, built a mosque, and called it the Mosque of Omar; sibi sumentes dimidium vestibuli ecclesie in ipso oratorium extruerunt, quod oratorium Omar vocitarunt." (Eut. Ann. p. 1,100 ed. Migne.) This is a most important historical fact, confirming the account of Arculfus in 697, and of Willibaldus in 786, and of Bernardus in 870 A.D., that the Anastasis and the Basilica which they had seen were still undefiled by Mahometan hands. One Caliph, indeed, had been more than tolerant. Al Mamun, in 812-833 A.D., had a Christian prefect and two Christian chamberlains, who built churches with his approval; and we need not, therefore, wonder that he went even further, and aided the Christians personally by adorning their Anastasis with a magnificent roof; and—for I cannot receive the incredible imputation on his honour and his common sense that he had a lie in his right hand when he wrote the inscription—that he left his liberality on record even to this moment within the circle of the Dome.

But dark days were coming on the Church in Jerusalem. The Mahometan dynasty was changed more than once. Omar and his covenant were forgotten. Orders were issued by El Hakem, the Fatimid Caliph, and the great Christian Basilica, the Ecclesia Resurrectionis, the church built by Constantine in honour of the Cross and the Resurrection, was levelled with the dust. That was in 1010 A.D., the commencement of the revolution spoken of by Marinus Sanuto, 1321 A.D. For, referring to the Crusades, he says: "The Turks captured Jerusalem from the Latins after they had held it for 88 years; and just about the same time it had been held by the Turks before." Capta est Jerusalem à Turchis postquam annis 88 fuerat sub dominio Latinorum; et quasi tantundem prius fuerat à Turchis possessa (iii. 6. Gesta Dei.)

That, then, we may well suppose was the unhappy period when the whole Haram was closed against the worshippers of Christ; when

they were driven forcibly from their venerated Anastasis, which was then, for the first time, turned into a mosque; and the Church of the Holy Sepulchre, thus desecrated by Mahometan superstition, became from that hour the Dome of the Rock.

## CONCLUSION.

When the Christians were driven from the Haram and shut out from the Holy Sepulchre, they were in a great strait. They were sore pressed besides by the cries of the pilgrims, and it is not surprising that they looked out at once for a substitute in some degree for what they had lost apparently for ever. We need not suppose that at the outset, when they raised memorials of the Sepulchre and the other holy places, they meant more than memorials (like those in other countries) of the crucifixion, burial, and resurrection of their Redeemer, where they could pour out their grief, and give utterance to their exultation. But, by a natural process in minds full of enthusiasm and biased by their wishes, the signs of the things were converted by degrees, as time went on, into the things they signified, and the people loved to have it so, and forgave and forgot the past. In this way for 38 years they endured their deprivation of the Basilica, till at last the enemies of Christ relented. Funds were raised, permission was granted to rebuild the Basilica, the Church of the Resurrection. And they did so; but not quadrangular as before, but round; nor in the same spot; not in the east on Mount Moriah from which they were shut out, but in the west, on Mount Sion. They had long chosen and occupied the spot with their humble oratory; but the position was ill-considered, and stood self-condemned. For, when Constantine raised out of its grave the actual Sepulchre of Christ, and cleared away the earth, the Rock with its holy cave stood out "erect and alone in a level land," says Eusebius. The new memorial, however, and the new church placed over it, stood on the sloping side of Mount Sion. "Now," says William of Tyre, "in devexo quod ad orientem respicit sita est Sancta Resurrectionis Ecclesia, forma quidem rotunda." And its new position forced on them a contrivance, unheard of before, for lighting the building: the centre of its dome was left open, in order to admit the light, which the high overhanging cliff behind it would otherwise have obscured; "and immediately underneath this opening the memorial of the Saviour is placed."

After this the treatment of the poor Christians in Jerusalem for half a century was so absolutely shocking and intolerable that Europe, in indignation, rushed to their relief. On the arrival of the Crusaders, the new church of the Holy Sepulchre was greatly enlarged so as to embrace all the holy places around it; and the whole city being theirs, they seized, of course, on its great glory, the Dome of the Rock. The crescent on its summit gave way to the Cross. The Holy Rock itself, encased in marble as of old, was turned into a Christian altar, and the building converted once more into a Christian church.

It was a short triumph, however, ending in their expulsion in 1188 A.D. The victorious and irritated Moslems tore down the cross and dragged it in dishonour through the streets; and purifying the whole building within with "many camel loads of rosewater," devoted it to their worship, and guarded the Holy Rock, as they guard it now, and have guarded it for more than 700 years, from injury and insult.

Thus by a singular providence it has fallen to the lot of the descendants of Mahomet to do a double service of the deepest interest to Christendom: to be temporary conservators in Hebron of the tomb of Abraham, and of the Sepulchre of Christ on Mount Moriah, to this day.

S. SMITH.

Vicarage, Lois Weedon.

## GRIMM'S ESSAYS.

To the Editor of THE READER.

Sir,—There is a slight inaccuracy in your notice of Herman Grimm's "Neue Essays." You say that essay appeared first as a German word about a year ago, on the title-page of a translation of Sir Henry Holland's Essays. Let me remind you that Herman Grimm was the first to introduce the word on the title-page of his first volume of "Essays," published in 1859. The present title of "Neue Essays" certainly implies that others have gone before; but though the name was used in German as long ago as 1859, it seems to have taken no root in that language.—Truly yours,

E. W.

# THE READER.

9 SEPTEMBER, 1865.

## SCIENCE.

### THE BRITISH ASSOCIATION.

Birmingham, Thursday Morning.

THE thirty-fifth meeting of the British Association is now fairly under weigh, and Birmingham lends itself admirably to this year's scientific congress, though the momentum of its busy roar of life is such that it is to all appearance but little impressioned by that sudden swerving of the allegiance of some from Vulcan to Pallas Athene. Still, the great heart of the great town is widening with the Association; and leaving out of the question the 3,000*l.* collected with such good will, the evidences of anxious care on all sides that the "wise week," as the Northmen called it, shall be besides an enjoyable one, if, indeed, not a merry one, are unmistakeable. This consummation, of course, is, in the main, due to the "local secretaries," men who, to the honour of our native land, crop up wherever the Association goes, to smooth all roughnesses and teach us the infinite amount of potential energy, great-heartedness, self-sacrifice, and patience, there is in this planet of ours, only waiting to be turned into the actual by the magic wand of opportunity.

For ourselves, although we came down early enough to be startled by the stupid or malicious, or the stupidly-malicious announcement in one of the evening papers—the name of which we will not give, for we are in a charitable mood—that Sir Charles Lyell was no more (let us hasten to say that he is alive and well), we found the arrangements admirably perfect, and the "Reception Room" in complete working order, albeit the colossal pipes of the great organ in the magnificent Town Hall were thundering in response to other influences than the gentle motion of the pedals. And this brings us to the next source of congratulation—the admirable rooms placed at the disposal of the different sections, and their convenient situation. Thus the eight sections, including D1, are housed in three buildings: four sections in the Midland Institute and Free Library, opened yesterday by Lord Stanley; two more in King Edward's School, not far removed from the former, and close to the Reception Rooms; and the remainder very comfortable in the Friends' Meeting House, somewhat out of the world, perhaps, from the Birmingham point of view, though handily situate judged by other standards.

Up to eight o'clock last evening the number of tickets issued was as follows: Old Life Members, 222; New ditto, 37; Old Annual Subscribers, 181; New ditto, 122; Associates, 638; Ladies, 447.

These numbers, however, are being rapidly added to this morning; so that the success of this meeting, in a financial point of view also, can scarcely be doubted. This is what should happen in "Phillips' year," for in no better way can the Association point the glowing eulogy pronounced last night by Sir Charles Lyell on the man who will ever be looked upon as its best and most constant friend.

A fair sprinkling of foreigners has already arrived, and more are expected. As at Bath last year, a most hospitable reception awaits them—a state of things, by the way, by no means confined to savans of foreign growth.

Yesterday morning our inner horizons were considerably clouded, and while the Council were assembled at their early meeting—nine o'clock!—the buzz in the Reception Room had but one burden, Will the Association include in its future programmes the magic letter H, or will it—well, drop it? All our readers of course know what hung on this question. It is one on which by far too much has been said on both sides. We will content ourselves here with a brief summary of what took place.

But we anticipate; the ordinary business must not be forgotten. This consisted of the confirmation of the minutes of the last meeting, and of the reading of several reports. That of the Council informs us that MM.

Hébert, Moritz, Neumeyer, Vámbéry, and Welwitsch had been added to the list of corresponding members. The balance sheet showed last year's income as 3,831*l.* 19*s.* 1*d.*, and out-go as 3,072*l.* 16*s.* 7*d.*, leaving a balance in the hands of the treasurer of 759*l.* 2*s.* 6*d.*, and the Parliamentary committee, in the choicest Parliamentary language, detailed their labours of the past year. They especially brought under the notice of the Council the unsatisfactory character of the provisions of the Public Schools Bill of last session, so far as they affected the interests of science. They had advocated such alterations therein as they believed would be most likely to promote these interests; and at the suggestion of one of their members "Professors Sharpey, W. A. Miller, Huxley, and Tyndall were applied to, and gave the admirable evidence on the extent to which physical science might with advantage be introduced into the studies of our great public schools, which will be found in the appendix to the report of the Committee of the House of Lords on the bill above referred to, and to which the attention of all engaged in the instruction of youth may be usefully directed. Some valuable remarks on the same subject by our President-elect had been previously referred to in the course of the debate; but the evidence of our President, Drs. Carpenter and Hooker, the Astronomer Royal, and others, before the Public School Commissioners, furnishes an additional proof, if any were wanting, of the zeal and energy with which the cultivators of science continue to remonstrate against the system, which still unhappily prevails in many of our schools, of ignoring the claims of science.

Then followed the Kew Report, which this year is more valuable and interesting than usual, and this is saying a good deal. All interested in solar physics will be delighted to read those parts of it which refer to Schwabe's noble gift, and the new use to which Mr. Delarue is about to put the Kew Pagoda—useful at last. We must also dwell upon the last paragraph. Kew is rapidly becoming a vast focus of physical knowledge; and we may add, that when Mr. Cooper's admirable contrivance, described in the Report, is mounted, there will be few sextants used which have not been verified at Kew. This Report ran as follows:—

#### REPORT OF THE KEW COMMITTEE OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE FOR 1864-65.

The Committee of the Kew Observatory submit to the Council of the British Association the following statement of their proceedings during the past year:—

A short time before the meeting at Bath, it had been decided by the Secretary of State for India, on the recommendation of the President and Council of the Royal Society, that pendulum observations should be made in India, and that the officer appointed to conduct this experimental investigation might receive instruction at Kew Observatory, which might form the base-station of the Indian series.

In consequence of this decision, Captain Basevi, R.E., first assistant in the Indian Trigonometrical Survey, received instruction at Kew Observatory in the method of making and reducing pendulum observations, and in that of taking transits. Colonel Walker, R.E., superintendent of the Survey, also attended, in order to make himself acquainted with the details of the apparatus and the method of observing.

The pendulums used were those marked No. 1,821 and No. 4, used formerly by General Sabine in different parts of the globe. The former was also used by Mr. Airy in his Harton Colliery experiments.

A receiver, by means of which these pendulums might be vibrated in *vacuo*, was constructed by Mr. Adie, optician, London. A convenient room for pendulum observations was likewise fitted up in the Observatory, the expense being defrayed from the Government Grant Fund of the Royal Society; and in this room the preliminary observations were made for determining the constants of the two pendulums about to be used in India. These observations were made by Mr. Loewy, and the results have been communicated to the Royal Society by the superin-

tendent, in conjunction with the observer. The pendulums and other apparatus were subsequently taken to India by Mr. J. Hennessey, and have arrived safely at the head-quarters of the Trigonometrical Survey.

General Sabine has been informed by Mr. Meldrum, Director of the Mauritius Observatory, that the necessary funds have been voted by the Government of that colony for hourly meteorological and magnetical observations; and that he may shortly be expected in this country, in order to become acquainted with the working of the Kew instruments. In consequence of this communication, Mr. Adie has constructed a set of self-recording magnetographs, in readiness for Mr. Meldrum's arrival.

A dip circle and unifilar have been verified at Kew, and will shortly be despatched to Mr. Ellery, Director of the Observatory, Melbourne, Australia.

Two dip circles and two unifilars, ordered by Colonel Walker, R.E., Superintendent of the Indian Survey, have been verified in the presence of Colonel Walker, who has received instruction in the method of observation with these instruments. They have since been sent to India, where they have safely arrived.

Three dip circles and three unifilars, ordered by Colonel Strange, are being verified at the Observatory, and likewise one dip circle and one unifilar recently ordered by Captain J. Belavennetz, of the Russian Navy, for the Compass Observatory just built at Cronstadt.

Mr. E. Walker (who has received the Cambridge Adams prize for his essay on terrestrial magnetism) has been at Kew Observatory, receiving instruction in the use of magnetical instruments.

The usual monthly absolute determinations of the magnetic elements continue to be made; and the self-recording magnetographs are in constant operation, as heretofore, under Mr. Whipple, magnetical assistant, who has displayed much care and assiduity in the discharge of his duties.

The meteorological work of the Observatory continues to be performed by Mr. Thomas Baker, who likewise takes charge of the photographic department connected with the self-recording instruments, and executes both offices very satisfactorily.

Since the meeting at Bath, Senhor da Souza, of the University of Coimbra, has ordered a self-recording barograph and thermograph, an anemometer and electrograph, tubes for filling by Mr. Welsh's process, in order to obtain a standard barometer, and a cathetometer. These instruments have been constructed by opticians, and forwarded to Coimbra.

During the past year, 88 barometers and 420 thermometers have been verified, and six standard thermometers have been supplied to men of science and opticians; three sets of measures of capacity have likewise been verified.

The self-recording barograph continues in constant operation, and traces in duplicate are obtained, one set of which has been regularly forwarded to the meteorological department of the Board of Trade.

At the request of Mr. Charles Cator, an anemometer of his construction has been tested at the Observatory, and the results communicated to him; also, at the request of Professor Roscoe, the photographic action of total daylight is daily registered by an apparatus of his construction.

The Kew heliograph, in charge of Mr. De La Rue, continues to be worked by a qualified assistant, who gives much satisfaction. During the past year 243 negatives have been taken on 146 days, and four sets of positives have been printed from each, some of which have been given to men of science interested in this branch of research.

The negatives are being reduced, under the superintendence of Mr. De La Rue, and by means of an instrument of his own construction, which he has generously presented to the Kew Committee. Mr. B. Loewy has been engaged in the reduction, which he is executing satisfactorily.

It was mentioned in last report that an addition to the micrometer was in the course of construction, by means of which the proportion of the sun's disk obscured by spots might be conveniently measured. This arrangement is now completed; and the materials for measurement have been greatly increased through the kindness of Mr. Carrington, who has placed his original drawings, in which the size and appearance of the spots are delineated with great fidelity, at the disposal of the Kew Observatory. It may be desirable to state in a few words the proposed method of exhibiting the results of these reductions. In the progress of this branch of know-

## THE READER.

9 SEPTEMBER, 1865.

ledge observers have been led to recognize certain laws, which represent the average behaviour of sun spots, but to all of these laws there are individual exceptions. In this state of things it is probable that our knowledge of the subject will ultimately be advanced, not only by a study of those groups which behave in a normal manner, but also by a study of those which are exceptions in their behaviour to the general rule; and on this account it has been thought desirable to publish the results in such a way that anyone may be able to study the appearance and behaviour—in fact, the whole history of any one group.

In order to accomplish this, a lens is being made by Dallmeyer, by means of which individual groups may be magnified to a scale on which the diameter of the sun will be equal in size to two feet.

The sun spots continue to be observed after the method of Hofrath Schwabe, of Dessau.

As Kew is the first public institution which has taken up the subject of sun spots, and as it is intended to continue the method of numbering groups so long and successfully adopted by Hofrath Schwabe, it was thought desirable to endeavour to procure, if possible, for this country the original drawings made by this eminent and assiduous observer during a course of about forty years. A joint letter by Mr. De La Rue and Mr. Stewart was consequently addressed to Hofrath Schwabe, and the following answer to it was soon received :—

"Gentlemen,—The request contained in your letter, although in the highest degree honourable and complimentary to me, and although it gives me an opportunity to show the Royal Astronomical Society my gratitude for the Royal medal granted to me, has still cost me some struggle before complying with it; for it is not easy to part with what has given me very often much pleasure and enjoyment as a compensation for the labour devoted to the work.

"But in complying with your desire I do so on one condition—viz., that you would grant me permission to obtain the observations back again at any time that I should be desirous of looking into them, during the short time of life still left to me. I do not think that I shall have an occasion to avail myself of the permission asked for, but permit me kindly to believe that it is in my power to do so. After my death you may consider the whole of the observations as the property of the Royal Astronomical Society.

"Please to write me if you are willing to agree to the above desire, and I shall then immediately send you my astronomical diaries, &c., from 1825 to the end of 1864.—I remain, gentlemen, yours very faithfully,

S. H. SCHWABE."

In order to realize this generous bequest of Hofrath Schwabe, Mr. Loewy, of the Kew Observatory, went to Dessau, taking with him a selection of duplicate negatives and prints of the sun, which he presented, in the name of the Association, to that gentleman. After receiving Mr. Loewy most courteously, Hofrath Schwabe expressed his gratification at the high degree of perfection attained in photoheliography, which surpassed his most sanguine expectations; he also handed over to Mr. Loewy's trust not only his valuable collection of sun drawings, but also all his astronomical observations. Some of these will be exhibited at the Association.

It has long been a desideratum in photoheliography, with the view of obtaining the apparent diameter of the sun's disk, to ascertain the absolute values in arc of the divisions of the measuring instrument (Mr. De La Rue's Micrometer), and preliminary experiments were made with that object during the period that the Heliograph was at the Cranford Observatory. These were only partially successful. The mode of operation was this: a suitable object sufficiently distant was photographed by means of the Kew instrument, with the lenses in the same positions as when solar pictures were taken. Different portions of the object (windows, doors, &c., of a house, for example) were then carefully measured, so as to ascertain their value in minutes and seconds of arc; and by measuring the pictures of these several portions with the arbitrary scale of the Micrometer, the value of the latter in arc could be calculated. The experiments did not succeed so well as could have been desired, in consequence of the disturbance of the images by the undulations of the atmosphere, none but very low objects coming within the desired range. More recently, however, the experiments have been taken up again with great promise, and excellent photographs of the Kew Pagoda have been obtained, which

possess the requisite sharpness. The object itself, on account of its numerous galleries, is peculiarly fitted for such observations, as it will be possible to ascertain and allow for any optical distortion of the photographic image. Thus it is not improbable that the Pagoda will afford the means of ascertaining, photographically, with the greatest accuracy, the angular diameter of the sun, and will give data for correcting the assumed semi-diameter of the moon, by the discussion of photographic pictures of solar eclipses.

M. Gussew has informed Mr. De La Rue that the Wilna Heliograph is now at work under his direction, during the absence, on account of ill health, of the Director, Prof. Sabler. At present he experiences some difficulty in obtaining perfect photographs, and he has been invited to receive instruction at the Kew Observatory. It is considered to be desirable on other accounts that M. Gussew should be able to avail himself of the advantage thus offered to him, as an arrangement might then be made for the division of the labour of reducing the Heliographic observations.

An apparatus will shortly be added to the Kew Observatory for the important object of the ready verification of sextants; the system of distant mirrors now in use, designed by Mr. Galton and erected at his own cost, being only available in steady sunshine.

The new apparatus has been designed by Mr. Thomas Cooke, the well-known optician. In principle, it consists of four collimators fixed radially, at various angles apart, round the table on which the sextant is to be laid for examination. The cross wires of the collimators in each of their combinations are to be brought successively into contact by the sextant. Then, a comparison of its readings with the constant angles of construction of the apparatus, determines the error of the sextant at various points of its arc. However, in practice, to avoid the cost of very large collimators, whose object glasses would suffice to include the rays proceeding both to the index and to the horizon glasses of large sextants, Mr. Cooke employs double collimators of moderate size; and he adjusts each pair to strict parallelism, by aid of a detached telescope.

The coloured shades of the sextant are readily examined, by strongly illuminating the fields of two of the collimators, after contact of their cross wires has been made in the ordinary manner.

On the application of Mr. Galton, backed by the recommendation of the Kew Committee, the Council of the Royal Society has allotted 80*l.* from the Government Grant, to defray the estimated cost of Mr. Cooke's apparatus, and its establishment in the Observatory at Kew.

The apparatus will be erected in the basement-hall of the Observatory; and when the arrangement is complete, it is hoped that the Observatory will become a place where quadrants and sextants can be verified with great facility, and where scientific travellers or officers in Her Majesty's Service may receive instruction in the use of geographical instruments.

The solar spectrum is being mapped by the spectroscope belonging to the Chairman. All the measurements for the region between D and E have been made and carefully verified; and a map of this region, in accordance with these measurements, has been constructed by Mr. Loewy. Many more lines are exhibited in this map than in that lately made by Professor Kirchhoff. Observations made by this instrument have likewise brought out several new lines in the spectrum of ignited sodium.

At the joint suggestion of Professor Tait, of Edinburgh, and the Superintendent, an ingenious apparatus has been constructed by Mr. Beckley, by means of which a disk can be made to revolve *in vacuo* with great velocity; and a short description of some experiments performed by means of this instrument, with the view of ascertaining whether visible as well as molecular motion is dissipated by a medium pervading space, has been communicated to the Royal Society by the Superintendent in conjunction with Professor Tait.

The instrument devised by Mr. Broun, for the purpose of estimating the magnetic dip by means of soft iron, remains at present at the Observatory.

The Superintendent has received grants from the Royal Society for special experiments; and when these are completed, an account will be rendered to that Society.

It will be seen from the foregoing Report, that many other experiments and observations, of a nature to advance science, are made under the sanction of the Committee, besides those which

form the ordinary work of the Observatory; it is, however, always stipulated that the cost of such experiments shall be defrayed by their promoters.

J. P. GASSIOT, Chairman.  
Kew Observatory, August 31, 1865.

The balance-sheet attached to the report is extremely satisfactory, showing not only a balance to the good, but that opticians and others are learning the value of increasing the supply of the sinews of war in the shape of payments for the verification of instruments.

So much for the ordinary work the general committee had to get through at its first meeting. The extraordinary proceedings—and we mean the word, every letter of it, though by no means in an unpleasant sense—were commenced by Dr. Hunt, who supported his proposition, to the effect that there should be a new section, H, devoted solely to Anthropology. In a capital speech, the unimportance of the name, the great importance of the thing, was insisted upon, and the question was pronounced a European one. In measured cadence, Sir R. Murchison, in reply, moved a direct negative and for awhile scientific conversation surged triumphant. What if Pritchard, twenty-one years ago, had proposed a more important treatment for ethnology. It was thirty-four years since an entirely new section had been proposed. (?) True, phrenology was once almost suggested for a sub-section, but the voice of the charmer had failed, nor had the prospective lowing of innumerable herds proved music sweet enough to induce the Association to accept an agricultural platform.

To Sir Roderick succeeded Mr. Grove, who, dealing with things in the abstract merely, pointed out the necessarily artificial and empirical division of the subjects. Nay, why should there not be a section devoted to electricity, in which, in its physical, chemical, physiological, and practical aspect, the magic fluid could be dealt with as a whole, and so on?

Then did Dr. Wright attempt to reconcile the contending hosts by an amendment to the effect that Sub-section D should for the future perform the functions destined for Section H. This amendment was seconded by Mr. Wallace, amended in turn by Dr. Lee, and supported by a touching history of Section D, which Dr. Wright stated had never forgotten the formation of the sub-section. On this point Dr. Acland subsequently joined issue with him—we will not decide it. Mr. Crawford was next among the speakers, grim in his suppressed smile and in his offer to shake hands with Dr. Hunt, as a preparatory to the tussle. But Mr. Crawford was discursive, the excitement was at its highest, and he was compelled to give place to Professor Phillips.

Professor Phillips had an universal panacea, which, under certain conditions, would cure everything; but for its proper reception all baser medicines must be purged away. Would Dr. Lee have faith and withdraw his amendment of the amendment? Yes! Would Dr. Wright withdraw the amendment itself? Dr. Wright was unbelieving, and though quite in the hands of the meeting, would prefer a sight of the panacea before he gave up his own nostrum. Well, then, he should have a sight of it! Alas! it was rejected, and amended amendment, amendment, and original motion were put and negatived, amid strange and most amusing confusion. *Vae Victis!* Another sad page in the history of poor letter H!

Still, we are not to have an Anthropological Congress, Sir Roderick's gentle suasion notwithstanding. Dr. Hunt, with sound policy and good taste, has already distributed his papers among the different sections.

After the excitement had somewhat subsided, Professor Phillips proposed the following resolution, which, though insufficient as an amendment to Dr. Hunt's proposition, is nevertheless a good piece of legislation: "That, in future, all proposals for establishing new sections, altering the titles of existing ones, or making any other change in the constitutional forms and fundamental rules of

# THE READER.

9 SEPTEMBER, 1865.

the Association, be referred to the Recommendation Committee for a report."

Of the meeting in the Town Hall in the evening, to hear Professor Phillips's speech, we need say little. Sir Charles Lyell introduced his successor with much feeling, and after the address a vote of thanks was proposed by Sir Roderick Murchison, and seconded by the Mayor. The magnificent hall was comfortably filled, but not to overflowing.

The address ran as follows :—

Assembled for the third time in this busy centre of industrious England, amid the roar of engines and the clang of hammers, where the strongest powers of nature are trained to work in the fairy chains of art, how softly falls upon the ear the accent of Science, the friend of that art, and the guide of that industry! Here, where Priestley analysed the air, and Watt obtained the mastery over steam, it well becomes the students of nature to gather round the standard which they carried so far into the fields of knowledge. And when, on other occasions, we meet in quiet colleges and academic halls, how gladly welcome is the union of fresh discoveries and new inventions with the solid and venerable truths which are there treasured and taught. Long may such union last; the fair alliance of cultivated thought and practical skill; for by it labour is dignified and science fertilized, and the condition of human society exalted!

Through this happy union of science and art, the young life of the British Association—one-third of a century—has been illustrated by discoveries and enriched by useful inventions in a degree never surpassed. How else could we have gained that knowledge of the laws of nature which has added to the working strength of a thousand millions of men the mightier power of steam, extracted from the buried ruins of primeval forests their treasured elements of heat and light and colour, and brought under the control of the human finger, and converted into a messenger of man's gentlest thoughts, the dangerous mystery of the lightning?

How many questions have we asked—not always in vain—regarding the constitution of the earth, its history as a planet, its place in creation;—now probing with sharpened eyes the peopled space around—peopled with a thousand times ten thousand stars;—now floating above the clouds in colder and clearer air;—now traversing the polar ice—the desert sand—the virgin forest—the unconquered mountain;—now sounding the depths of the ocean, or diving into the dark places of the earth. Everywhere curiosity, everywhere discovery, everywhere enjoyment, everywhere some useful and therefore some worthy result. Life in every form, of every grade, in every stage; man in every clime and under all conditions; the life that now surrounds us, and that which has passed away;—these subjects of high contemplation have been examined often, if not always, in the spirit of that philosophy which is slowly raising, on a broad security of observed facts, sure inductions, and repeated experiments, the steady columns of the temple of physical truth.

Few of the great branches of the study of nature on which modern philosophy is intent were left unconsidered in the schools of Athens; hardly one of them was or indeed could be made the subject of accurate experiment. The precious instruments of exact research—the measures of time, and space, and force, and motion—are of very modern date. If instead of the few lenses and mirrors of which traces appear in Greek and Roman writers, there had been even the first Galilean or the smallest Newtonian telescope in the hands of Hipparchus, Eratosthenes, or Ptolemy, would it have been left to their remote successors to be still struggling with the elements of physical astronomy, and waiting with impatience till another quarter of a century shall have rolled away and given us one more good chance of measuring the distance of the sun by the transit of Venus? Had such instruments as Wheatstone's chronoscope been invented, would it have been left to Foucault to condense into his own apartment an experimental proof of the velocity of light, and within a tract of thirty feet to determine the rate of its movement through all the vast planetary space of millions and thousands of millions of miles, more exactly than had been inferred by astronomers from observations of the satellites of Jupiter? By this experiment the velocity of light appears to be less, sensibly less, than was previously admitted; and this conclusion is of the highest interest. For, as by assuming too long a

radius for the orbit of Jupiter the calculated rate of light-movement was too great, so now by employing the more exact rate and the same measures of time we can correct the estimated distance of Jupiter and all the other planets from the sun. We have, in fact, a really independent measure of planetary space; and it concurs with observations of the parallax of Mars in requiring a considerable reduction of the assumed diameters of the planetary paths. The distance of the earth from the sun must be reduced from above ninety-five to less than ninety-three millions of miles, and by this scale the other space-measures of the solar system, excepting the diameter of the earth and the distance and diameter of the moon, may be corrected.

The light and heat which are emitted from the sun reach the earth without great diminution by the absorptive action of the atmosphere; but the waste of heat from the surface of our planet through radiation into space is prevented, or rather lessened, by this same atmosphere. Many transparent bodies admit freely heat-rays derived from a source of high temperature, but stop the rays which emanate from bodies only slightly warmed. The atmosphere possesses this quality in a remarkable degree, and owes it to the presence of diffused water and vapour; a fact which Dr. Tyndall has placed in the clear light of complete and varied experiment. The application of this truth to the history of the earth and of the other planets is obvious. The vaporous atmosphere acts like warm clothing to the earth. By an augmented quantity of vapour dissolved, and water suspended in the air, the waste of surface-heat of the earth would be more impeded; the soil, the water, and the lower parts of the atmosphere would grow warmer; the climates would be more equalized; the general conditions more like what has been supposed to be the state of land, sea, and air during the geological period of the coal-measures.

Such an augmentation of the watery constituents in the atmosphere would be a natural consequence of that greater flow of heat from the interior, which by many geologists, mathematicians, and chemists is supposed to have happened in the earlier periods of the history of the earth.

By the same considerations we may understand how the planet Mars, which receives not half so much heat from the sun as the earth does, may yet enjoy, as in fact it seems to enjoy, nearly a similar climate, with snows alternately gathering on one or the other of its poles, and spreading over large spaces around, but not, apparently, beyond the latitude of 50° or 40°; the equatorial band of 30° or 40° North or South being always free from snow-masses bright enough and large enough to catch the eye of the observer. Mars may, therefore, be inhabited, and we may see in the present state of this inquiry reason to pause before refusing the probability of any life to Jupiter and even more distant planets.

The history of suns and planets is, in truth, the history of the effects of light and heat manifested in them, or emanating from them. Nothing in the universe escapes their influence; no part of space is too distant to be penetrated by their energy; no kind of matter is able to resist their transforming agency. Many, if not all the special forces which act in the particles of matter, are found to be reducible into the general form of heat; as this is convertible and practically is converted into proportionate measures of special energy. Under this comprehensive idea of convertibility of force, familiar to us now by the researches of Joule, the reasonings of Grove and Helmholtz, and the theorems of Rankine, it has been attempted by Mayer, Waterson, and Thomson to assign a cause for the maintenance of the heat-giving power of the sun in the appulse of showers of aerolites and small masses of matter, and the extinction of their motion on the surface of the luminary. By calculations of the same order, depending on the rate of radiation of heat into space, the past antiquity of the earth and the future duration of sunshine have been expressed in thousands or millions of centuries. In like manner the physical changes on the sun's disk, by which portions of his darkly-heated body become visible through the luminous photosphere, have been connected, if not distinctly as a cause, certainly as a coincident phenomenon, with particular magnetic disturbances on the surface of the earth; the solar spots and the magnetic deflections concurring in periods of maxima and minima of ten or eleven years' duration. Thus even these aberrant phenomena become part of that amazing system of periodical variation which Sabine and his fellow-labourers, British, French, German, Russian, and American, have

established by contemporaneous observation over a large part of the globe.

With every change in the aspect and position of the sun, with every alteration in the place and attitude of the moon, with every passing hour, the magnetism of the earth submits to regular and calculable deviation. Through the substance of the ground, and across the world of waters, Nature, ever the beneficent guide to Science, has conveyed her messages and executed her purposes by the electric current, before the discovery of Oersted and the magical inventions of Wheatstone revealed the secret of her work.

Even radiant light in the language of the new philosophy is conceived of by Maxwell as a form of electro-magnetic motion. And thus the imponderable, all-pervading powers, by which molecular energy is excited and exchanged, are gathered into the one idea of restless activity among the particles of matter:—

... eterno percita motu:  
ever-moving and being moved, elements of a system of perpetual change in every part, and constant preservation of the whole.

What message comes to us with the light which springs from the distant stars, and shoots through the depths of space to fall upon the earth after tens, or hundreds, or thousands of years? It is a message from the very birthplace of light, and tells us what are the elementary substances which have influenced the refraction of the ray. Spectral analysis, that new and powerful instrument of chemical research for which we are indebted to Kirchhoff, has been taught by our countrymen to scrutinize not only planets and stars, but even to reveal the constitution of the nebulae, those mysterious masses out of which it has been thought new suns and planets might be evolved—nursing-mothers of the stars. For a time, indeed, the resolution of some nebulae, by the giant mirror of Lord Rosse, afforded ground for opposing the speculation of Herschel and the reasoning of Laplace, which required for their very starting-point the admission of the existence of thin gaseous expansions, with or without points or centres of incipient condensation, with or without marks of internal movement. The latest results, however, of spectral analysis of stars and nebulae by Mr. Huggins and Professor W. A. Miller have fairly restored the balance. The nebulae are indeed found to have in some instances stellar points, but they are not stars; the whole resembles an enormous mass of luminous gas, with an interrupted spectrum of three lines, probably agreeing with nitrogen, hydrogen, and a substance at present unknown. Stars tested by the same accurate hands are found to have a constitution like that of our own sun, and, like it, to show the presence of several terrestrial elements—as sodium, magnesium, iron, and very often hydrogen. While in the moon and Venus no lines whatever are found due to an atmosphere, in Jupiter and Saturn, besides the lines which are identical with some produced in our own atmosphere, there is one in the red, which may be caused by the presence of some unknown gas or vapour. Mars is still more peculiar, and enough is ascertained to disconcert the notion of his redness being due to a peculiarity of the soil.

To aid researches into the condition of celestial bodies, the new powers of light, discovered by Niepce, Daguerre, and Talbot, have been employed by Bond, Draper, De la Rue, and other astronomers. To our countryman, in particular, belongs the honour of successful experiments on the rose-coloured flames which extend from certain points of the sun's border during an eclipse; as well as of valuable contributions through the same agency, to that enlarged survey of the physical aspect of the moon which, since 1852, the Association has striven to promote. By another application of the same beautiful art, in connexion with clockwork, the momentary changes of magnetic force and direction, the variations of temperature, the fluctuations of atmospheric pressure, the force of the wind, the fall of rain, the proportion of ozone in the air, are registered in our observatories; and thus the inventions of Ronalda and his successors have engaged the solar rays in measuring and comparing contemporaneous phenomena of the same order over large parts of the globe—phenomena some of which are occasioned by those very rays.

As we ascend above the earth, heat, moisture, and magnetic force decrease, the velocity of wind augments, and the proportion of oxygen and nitrogen remains the same. The decrease of heat as we rise into the air is no new subject of inquiry, nor have the views respecting it been very limited or very accordant. Leslie considered it mathematically in relation to pressure;

## THE READER.

9 SEPTEMBER, 1865.

Humboldt gave the result of a large inquiry at points on the earth's surface, unequally elevated above the sea; and finally, Mr. Glaisher and Mr. Coxwell, during many balloon ascents to the zones of life-destroying cold, far above our mountain tops, have obtained innumerable data, in all seasons of the year, through a vast range of vertical height. The result is to show much more rapid decrease near the earth, much slower decrease at great elevations; thus agreeing in general with the view of Leslie, and yet throwing no discredit on the determinations of Humboldt, which do not refer to the free atmospheric ocean, but to the mere borders of it where it touches the earth and is influenced thereby.

The proportion of carbonic acid gas in the atmosphere at great heights is not yet ascertained: it is not likely to be the same as that generally found near the earth; but its proportion may be more constant, since in those regions it is exempt from the influence of the actions and re-actions which are always in progress on the land and in the water, and do not necessarily compensate one another at every place and at every moment.

Other information bearing on the constitution of the atmosphere comes to us from the auroral beams and other meteoric lights known as shooting stars. For some of these objects not only appear at heights of 10, 50, and 100 or more miles above the earth, but at the height of 50 miles it is on record that shooting stars or fire-balls have left waving trains of light, whose changes of form were in seeming accordance to varying pressure in the elevated and attenuated atmosphere.

Researches of every kind have so enriched meteorology since our early friend, Professor J. Forbes, printed his suggestive reports on that subject, and so great have been the benefits conferred on it by the electric telegraph, that at this moment in M. Leverrier's observatory at Paris, and the office so lately presided over by Admiral Fitzroy in London, the messages are arriving from all parts of Europe to declare the present weather, and furnish grounds for reasonable expectation of the next probable change. Hardly now within the seas of Europe can a cyclone begin its career of devastation, before the warning signal is raised in our sea-ports, to restrain the too confident sailor. The gentle spirit which employed this knowledge in the cause of humanity has passed away, leaving an example of unselfish devotion, in a work which must not fail through any lack of energy on the part of this Association, the Royal Society, or the Government. We must extend these researches and enlarge these benefits by the aid of the telegraph bringing the ends of the world together. Soon may that thread of communication unite the two great sections of the Anglo-Saxon race, and bring and return through the broad Atlantic the happy and mutual congratulations for peace restored and friendships renewed.

The possible combinations of force by which, in the view we have been considering, the characteristic forms and special phenomena of solid, liquid, and gaseous matter are determined, may be innumerable. Practically, however, they appear to be limited, as natural products, to less than one thousand distinguishable compounds, and less than one hundred elementary substances. Of these elements the most prevalent are few on the earth; as of gases, oxygen, hydrogen, nitrogen; of solids, silicon, calcium, magnesium, sodium, iron; and it is interesting to learn by analysis of the light of stars and planets, that these substances, or some of them, are found in most of the celestial objects yet examined, and that, except in one or two instances, no other substances have been traced therein. Even the wandering meteoric stones, which fall from their courses, and are examined on the earth, betray only well-known mineral elements, though in the manner in which these are combined some differences appear, which by chemical research and the aid of transparent sections Professor Maskelyne and Mr. Sordy are engaged in studying and interpreting.

By the labours of Lavoisier and his contemporaries, chemistry acquired a fixed logic and an accurate nomenclature. Dalton and the great physicists of the early part of this century gave that law of definite combination by proportionate weights of the elements which is for chemistry what the law of gravitation is for celestial mechanics. A great expansion of the meaning of the atomic theory took place, when Mitscherlich announced his views of isomorphous, isomeric, and dimorphous bodies. For thus it came gradually to appear that particular forces resided in crystals in virtue of their structure, lay in certain directions, and exhibited definite physical effects, if the chemical elements, without being the same,

were combined in similar proportions, and aggregated into similar crystals. Some years later, ozone was discovered by Schönbein, and it concurred with a few other allotropic substances in reviving, among philosophic chemists, the inquiry as to the relative situation of the particles in a compound body, and the effects of such arrangements: an idea which had been expressed by Dalton in diagrams of atoms, and afterwards exercised the ingenuity of Exley, MacVicar, and others.

Everything connected with this view of the modification of physical properties by the arrangement of the particles—whether elementary or compound—is of the highest importance to mineralogy, a branch of study by no means so much in favour even with chemists as its own merits and its collateral bearings might justly deserve. Yet it is in a great measure by help of this branch of study that the opinions now current regarding metamorphism of rocks *in situ*, and the formation of mineral veins, must acquire that solid support and general consent which at present they do not possess. Crystals, indeed, whether regarded as to their origin in nature, their fabrication by art, or their action on the rays of light, the waves of heat and sound, and the distribution of electricity, have not been neglected by the Association or its members. In one of the earliest reports, Dr. Whewell calls attention to the state of crystallographical theory, and to the artificial production of crystals; and in another report, Professor Johnstone notices epigene and pseudomorphous crystallization; and for many years, at almost every meeting, new and brilliant discoveries in the action of crystals on light were made known by Brewster, and compared with the undulatory theory by Herschell, MacCullagh, Airy, Hamilton, Whewell, Powell, Challis, Lloyd, and Stokes.

The unequal expansion of crystals by heat, in different directions, first observed by Mitscherlich, has been carefully examined in the cases of sulphate and carbonate of lime by Professor W. H. Miller, who has also considered their elasticity, originally measured in different relations to the axis by Savart. These and many other interesting relations of crystals have been attended to; but the Association has not yet succeeded in obtaining a complete digest of the facts and theories connected with the appearance of crystals in nature—in the fissures of rocks; in the smaller cavities of rocks; in the solid substance or liquid contents of other crystals. Such an inquiry, however, it did earnestly demand, and some steps have been taken by our own chemists, mineralogists, and geologists. But more abundant information on this class of subjects is still needed, even after the admirable contributions and recent discoveries of Bischof, Delesse, and Daubrée.

Within our Association-period both the nomenclature of chemistry and the conception of the atomic theory have received not indeed a change, but such an addition to their ordinary expression as the more general language and larger meaning of algebra have conferred on common arithmetical values. The theory of compound radicals, as these views of Liebig, Dumas, and Hofmann may be justly termed, embraces the consideration of groups of elements united in pairs by the ordinary law, these groups being for the purpose in hand treated as single elements of combination. The nomenclature which attempts in ordinary words to express these relations grows very unmanageable even in languages more easily capable of polysyllabic combinations than ours; but symbols of composition—the true language of chemistry—are no more embarrassed in the expression of these new ideas than are the mathematical symbols which deal with operations of much greater complexity on quantities more various and more variable. The study of these compound radicals comes in aid of experimental research into those numerous and complex substances which appear as the result of chemical transformations in organic bodies. Thus in some instances the very substances have been recomposed by art which the vital processes are every moment producing in nature; in others the steps of the process are clearly traced; in all the changes become better understood through which so great a variety of substances and structure are yielded by one circulating fluid; and the result is almost a new branch of animal and vegetable physiology, not less important for the health of mankind than essential to the progress of scientific agriculture.

The greater our progress in the study of the economy of nature, the more she unveils herself as one vast whole; one comprehensive plan; one universal rule, in a yet unexhausted series of individual peculiarities. Such is the aspect of this

moving, working, living system of force and law, such it has ever been, if we rightly interpret the history of our own portion of this rich inheritance of mind, the history of that earth from which we spring, with which so many of our thoughts are co-ordinated, and to which all but our thoughts and hopes will again return.

How should we prize this history! and exult in the thought that in our own days, within our own memories, the very foundations of the series of strata, deposited in the beginning of time, have been explored by our living friends, our Murchison and Sedgwick, while the higher and more complicated parts of the structure have been minutely examined by our Lyell, Forbes, and Prestwich! How instructive the history of that long series of inhabitants which received in primeval times the gift of life, and filled the land, sea, and air with rejoicing myriads, through innumerable revolutions of the planet, before in the fulness of time it pleased the Giver of all good to place man upon the earth, and bid him look up to heaven.

Wave succeeding wave, the forms of ancient life sweep across the ever-changing surface of the earth; revealing to us the height of the land, the depth of the sea, the quality of the air, the course of the rivers, the extent of the forest, the system of life and death—yes, the growth, decay, and death of individuals, the beginning and ending of races, of many successive races of plants and animals, in seas now dried, on sand-banks now raised into mountains, on continents now sunk beneath the waters.

Had that series a beginning? Was the earth ever uninhabited, after it became a globe turning on its axis and revolving round the sun? Was there ever a period since land and sea were separated—a period which we can trace—when the land was not shaded by plants, the ocean not alive with animals? The answer, as it comes to us from the latest observation, declares that in the lowest deposits of the most ancient seas in the stratified crust of the globe, the monuments of life remain. They extend to the earliest sediments of water, now in part so changed as to appear like the products of fire. What life? Only the simpler and less specially organized fabrics have as yet rewarded research among these old Laurentian rocks—only the aggregated structures of Foraminifera have been found in what, for the present at least, must be accepted as the first deposits of the oldest sea. The most ancient of all known fossils, the Eozoon Canadense of Sir W. Logan, is of this low, we may even say lowest, type of animal organization.

Then, step by step, we are guided through the old Cambrian and Silurian systems, rich in Trilobites and Brachiopoda, the delights of Salter and Davidson; with Agassiz and Miller and Egerton we read the history of the strange old fishes of the Devonian rocks; Bronguiart, and Göppert, and Dawson, and Binney, and Hooker unveil the mystery of the mighty forests now converted to coal; Mantell and Owen and Huxley restore for us the giant reptiles of the Lias, the Oolite, and the Wealden; Edwards and Wright almost revive the beauteous corals and echinodermata; which with all the preceding tribes have come and gone before the dawn of the later periods, when fragments of mammoths and hippopotami were buried in caves and river sediments to reward the researches of Cuvier and Buckland, Prestwich and Christy, Lartet and Falconer.

And what is the latest term in this long series of successive existence? Surely the monuments of ever-advancing art—the temples whose origin is in caverns of the rocks; the cities which have taken the place of holes in the ground, or heaps of stones and timber in a lake; the ships which have outgrown the canoe, as that was modelled from the floating trunk of a tree, are sufficient proof of the late arrival of man upon the earth, after it had undergone many changes, and had become adapted to his physical, intellectual, and moral nature.

Compared with the periods which elapsed in the accomplishment of these changes, how short is the date of those yet standing monoliths, cromlechs, and circles of unhewn stone which are the oldest of human structures raised in Western Europe, or of those more regular fabrics which attest the early importance of the monarchs and people of Egypt, Assyria, and some parts of America! Yet tried by monuments of natural events which happened within the age of man, the human family is old enough in Western Europe to have been sheltered by caverns in the rocks, while herds of reindeer roamed in Southern France, and bears and hyenas were denizens of the south of England. More than this, remains of the rudest human

## THE READER.

9 SEPTEMBER, 1865.

art ever seen are certainly found buried with and are thought to belong to races who lived contemporaneously with the mammoth and rhinoceros, and experienced the cold of a Gallic or British winter, from which the woolly covering of the wild animals was a fitting protection.

Our own annals begin with the Kelts, if, indeed, we are entitled to call by that historic name the really separate nations, Belgian, Iberian, and Teutonic, whom the Roman writers recognize as settlers in Britain; settlers among a really earlier family, our rudest and oldest forefathers, who may have been, as they thought themselves to be, the primitive people of the land. But beyond the *Keltai* who occupied the sources of the Danube and the slopes of the Pyrenees, and were known to Rome in later days, there was present to the mind of the father of Grecian history a still more western race, the *Cynete*, who may perhaps be supposed the very earliest people of the extreme west of the continent of Europe. Were those the people, the first poor pilgrims from the east, whose footsteps we are slowly tracing in the valleys of Picardy and the south of England, if not on the borders of the lakes of Switzerland? Are their kindred still to be found among the Rhaetic Alps and the Asturian cliffs, if not amid the wilds of Connemara, pressed into those mountainous recesses by the legions of Rome, the spear of the Visigoth, and the sword of the Saxon? Or must we regard them as races of an earlier type, who had ceased to chip flints before the arrival of Saxon, or Goth, or Kelt, or Cynetian? These questions of romantic interest in the study of the distribution and languages of the families of man are part of a large circle of inquiry which finds sympathy in several of our sections, especially those devoted to zoology, physiology, and ethnology. Let us not expect or desire for them a very quick, or, at present, a very definite settlement. Deep shadows have gathered over all the earlier ages of mankind, which perhaps still longer periods of time may not avail to remove. Yet let us not undervalue the progress of ethnological inquiry, nor fail to mark how, within the period to which our recollections cling, the revelations of early Egypt have been followed by a chronology of the ancient kingdoms on the Tigris and Euphrates, through the same rigorous study of language. Thus has our Rawlinson added another page to the brilliant discoveries of Young and Champollion, Lepsius and Rosellini.

Nor though obtained in a different way, must we forget the new knowledge of a people nearer home, which the philosophic mind of Keller has opened to us among his native mountains. There, on the borders of the Alpine lakes, before the great Roman general crossed the Rhone, lived a people older than the Helvetians; whose rude lives, passed in hunting and fishing, were nevertheless marked by some of the many inventions which everywhere, even in the most unfavourable situations, accompany the least civilized of mankind. Implements of stone and pottery of the rudest sort belong to the earliest of these people; while ornamented iron weapons of war, and innumerable other fabrics in that metal, appear about the later habitations, and correspond probably to the period of the true Helvetii, who quitted their home and contended with Caesar for richer settlements in Gaul. The people of whom these are the traces on almost every lake in Switzerland are recognized as well in the ancient lake-basins of Lombardy and among the Tyrolean Alps, and farther on the north side of the mountains; and probably fresh discoveries may connect them with the country of the Sarmatians and the Scythians.

Thus at length is fairly opened, for archeology and paleontology to read, a new chapter of the world's history, which begins in the pleistocene periods of geology, and reaches to the prehistoric ages of man. Did our ancestors really contend, as the poets fancied, with stones and clubs against the lion and the rhinoceros, and thus expel them from their native haunts, or have they been removed by change of climate or local physical conditions? Was the existence of the hyena and the elephant only possible in Western Europe while a climate prevailed there such as now belongs to Africa or India? and was this period of high temperature reduced in a later time for the elk, reindeer, and musk ox, which undoubtedly roamed over the hills of England and France? If we think so, what a vista of long duration stretches before us, for no such changes of climate can be supposed to have occurred except as the effect of great physical changes, requiring a lapse of many thousands of years. And though we may think such changes of climate not proved, and probably careful

weighing of evidence may justify our disbelief, still, if the valleys in Picardy have been excavated since the deposit of the gravel of St. Acheul, and the whole face of the country has been altered about the caverns of Torquay since they received remains of animals and traces of man—how can we admit these facts and yet refuse the time required for their accomplishment? First, let us be sure of the facts, and especially of that main fact upon which all the argument involving immensity of time really turns—viz., the contemporaneous existence of man with the mammoth of the plains and the bear of the caverns. The remains of men are certainly buried with those of extinct quadrupeds; but did they live in the same days, or do we see relics of different periods gathered into one locality by natural processes of a later date, or confused by the operations of men?

Before replying finally to these questions, further researches of an exact kind are desirable, and the Association has given its aid towards them, both in respect to the old cavern of Kent's Hole, and the newly opened fissure of Gibraltar, from which we expect great results, though the best of our labourers has ceased from his honourable toil. When these and many other researches are completed, some future Lyell, if not our own great geologist, may add some fresh chapters to the "Antiquity of Man."

In judging of this antiquity, in counting the centuries which may have elapsed, since smoothed flints fitted with handles of wood were used as chisels and axes by the earliest people of Scandinavia or Helvetia, and flakes of flint were employed to cleanse the skins of the reindeer in the caves of the Dordogne, or stronger tools broke up the ice in the valley of the Somme, we must be careful not to take what is the mark of low civilization for the indication of very remote time. In every country, among every race of men, such rude weapons and tools are used now, or were used formerly. On the banks of the Ohio, no less than on the English hills, mounds of earth, rude pottery, and stone weapons occur in abundance; and indicate similar wants, contrivances, customs, ideas, in different races of men living in different periods. Even when in the same country, as in Switzerland, or England or Denmark, successive deposits of instruments of stone, bronze, or iron; successive burials of pines, beeches, and oaks; successively extinguished races of elephants, elks, and reindeer, give us a real scale of elapsed time, it is one of which the divisions are not yet valued in years or centuries of years.

Toward a right judgment of the length of this scale of human occupation, two other lines of evidence may be thought worthy of notice; one founded on the anatomical study of the remains of early men, the other on the laws of language. If the varieties of physical structure in man, and the deviations of language from an original type, be natural effects of time and circumstance, the length of time may be in some degree estimated by the amount of the diversities which are observed to have happened, compared with the variation which is now known to be happening. This process becomes imaginary, unless we assume all mankind to have had one local centre, and one original language. Its results must be erroneous, unless we take fully into account the superior fixity of languages which are represented in writing, and the greater tendency to diversity of every kind which must have prevailed in early times, when geographical impediments were aggravated by dissocial habits of life. It appears, however, certain that some differences of language, organization, and habits have separated men of apparently unlike races during periods longer than those which rest on historical facts.

Ever since the days of Aristotle, the analogy existing among all parts of the animal kingdom, and in a general sense we may say among all the forms of life, has become more and more the subject of special study. Related as all living beings are to the element in which they move and breathe, to the mechanical energies of nature which they employ or resist, and to the molecular forces which penetrate and transform them, some general conformity of structure, some frequently recurring resemblance of function, must be present, and cannot be overlooked. In the several classes this analogy grows stronger, and in the subdivisions of these classes real family affinity is recognized. In the smallest divisions which have this family relation in the highest degree, there seems to be a line which circumscribes each group, within which variations occur, from food, exercise, climate, and transmitted peculiarities. Often one specific group approaches another or several others, and a question arises whether, though now distinct, or rather distin-

guishable, they always have been so from their beginning, or will be always so until their disappearance.

Whether what we call species are so many original creations or derivations from a few types or one type, is discussed at length in the elegant treatise of Darwin, himself a naturalist of eminent rank. It had been often discussed before. Nor will any one think lightly of such inquiries, who remembers the essay of Linnaeus, "De Telluris orbis incremento," or the investigations of Brown, Prichard, Forbes, Agassiz, and Hooker regarding the local origin of different species, genera, and families of plants and animals, both on the land and in the sea. Still less will he be disposed to undervalue its importance, when he reflects on the many successive races of living forms more or less resembling our existing quadrupeds, reptiles, fishes, and mollusca, which appear to have occupied definite and different parts of the depths of ancient time; as now the tiger and the jaguar, the cayman and the gavial, live on different parts of the terrestrial surface. Is the living elephant of Ceylon the lineal descendant of that mammoth which roamed over Siberia and Europe and North America, or of one of those sub-Himalayan tribes which Dr. Falconer has made known, or was it a species dwelling only in circumpolar regions? Can our domestic cattle, horses and dogs, our beasts of chase and our beasts of prey, be traced back to their source in older types, contemporaries of the urus, megaceros, and hyena on the plains of Europe? If so, what range of variation in structure does it indicate? If not so, by what characters are the living races separated from those of earlier date?

Specific questions of this kind must be answered before the general proposition, that the forms of life are indefinitely variable with time and circumstance, can be even examined by the light of adequate evidence. That such evidence will be gathered and rightly interpreted, I for one neither doubt nor fear; nor will any be too hasty in adopting extreme opinions or too fearful of the final result, who remember how often that which is true has been found very different from that which was plausible, and how often out of the nettles of danger we have plucked the flowers of safety. At the present moment the three propositions which were ever present to the mind of Edward Forbes may be successfully maintained, as agreeing with many observed phenomena; and around them as a basis of classification may be gathered most of the facts and most of the speculations which relate to the history of life. First, it may be admitted that plants and animals form many natural groups, the members of which have several common characters, and are parted from other groups by a real boundary line, or rather unoccupied space. Next, that each of these groups has a limited distribution in space, often restrained by high mountains or deep seas, or parallels of temperature, within which it has been brought into being. Thirdly, that each group has been submitted to, or is now undergoing, the pressure of a general law, by which its duration is limited in geological time; the same group never reappearing after being removed from the series.

How important, in the view of this and many other questions, is that never-tiring spirit of geographical and maritime discovery, to which through four hundred years Europe has sent her noblest sons and her most famous expeditions; sent them, alas! too often to an early grave. Alas! for Franklin, who carried the magnetic flag into the icy sea from which he had already brought trophies to science. Alas! for Speke, who came home with honour from the head waters of the Nile! Forgotten they can never be, whenever, on occasions like this, we mourn the absence of our bravest and our best; praise, never-ending praise be theirs, while men retain the generous impulse which prompts them to enterprises worthy of their country and beneficial to mankind!

*Ἄτι σφῶν κλεός ἔσσεται καὶ αἰών.*

If it be asked, what share in the discoveries and inventions of the last thirty-three years is claimed for the British Association; let us answer fearlessly—we had a part in all. In some of them we took the foremost place by the frequency of our discussions, the urgency of our recommendations, the employment of our influence, and the grant of our funds. For others we gave all our strength, to support the Royal Society and other institutions in their efforts to accomplish purposes which we approve. In all instances our elastic system responds quickly to pressure, and returns the friendly impulse. If

# THE READER.

9 SEPTEMBER, 1865.

we look back on the work of previous years, it is easy to mark the special action of the Association in fields which hardly could be entered by any other adventurers.

Many of the most valuable labours of which we are now reaping the fruits were undertaken in consequence of the reports on special branches of science which appear in the early volumes of our "Transactions"—reports in which particular data were requested for confirming or correcting known generalizations, or for establishing new ones. Thus a passage in Professor Airy's report on physical astronomy first turned the attention of Adams to the mathematical vision of Neptune; Lubbock's report on tides came before the experimental researches and reductions, which since 1834 have so often engaged the attention of Whewell and Airy and Haughton, with results so valuable and so suggestive of further undertakings. Among these results may be placed additional knowledge of the probable depth of the channels of the sea. For before the desire of telegraphic communication with America had caused the bed of the North Atlantic to be explored by soundings to a depth seldom exceeding three miles, there was reason to conclude from the investigations of Whewell on cotidal lines that a depth of nine miles was attained in the South Atlantic, and from the separate computations of Airy and Haughton that a somewhat greater depth occurred in a part of the course of the tide-wave which washes the coast of Ireland. The greater portion of the sea-bed is within reach of soundings directed by the superior skill and greater perseverance of modern scientific navigators; a depth of six miles is said to have been reached in one small tract of the North Atlantic; depths of nine or ten miles in the deepest channels of the sea are probable, from considering the general proportion which is likely to obtain between sea-depths and mountain-tops. Thus the data are gradually being collected for a complete survey of the bed of the sea, including among other things information at least concerning the distribution of animal and vegetable life beneath the waters.

Waves—their origin, the mechanism of their motion, their velocity, their elevation, the resistance they offer to vessels of given form, these subjects have been firmly kept in view by the Association, since first Professor Challis reported on the mathematical problems they suggest, and Sir J. Robinson and Mr. Scott Russell undertook to study them experimentally. Out of this inquiry has come a better knowledge of the forms which ought to be given to the "lines" of ships, followed by swifter passages across the sea, both by sailing vessels and steamers, of larger size and greater lengths than were ever tried before.

One of the earliest subjects to acquire importance in our thoughts was the unexplored region of meteorology laid open in Professor J. Forbes' reports. Several of the points to which he called attention have been successfully attained. The admirable instruments of Whewell, Osler, and Robinson have replaced the older and ruder anemometers; and are everywhere in full operation, to record the momentary variations of pressure, or sum the varying velocities of the wind. No small thanks were due to Mr. Marshall and Mr. Miller for their enterprise and perseverance, in placing rain gauges and thermometers amidst the peaks of Cumberland and Westmoreland. These experiments are now renewed in both counties and in North Wales; and I hope to hear of similar efforts among the mountains of the West of Ireland and the West of Scotland. Our meteorological instruments of every kind have been improved; our system of photographic registration has spread from Kew into other observatories; and our corresponding member, Professor Dovè, has collected into systematic maps and tables the lines and figures, which represent annual and monthly climate over every land and sea.

In the same manner, by no sudden impulse or accidental circumstance, rose to its high importance that great system of magnetic observations on which for more than a quarter of a century the British Association and the Royal Society, acting in concert, have been intent. First, we had reports on the mathematical theory and experimental researches of magnetism by Christie, 1833, Whewell, 1835, and Sabine, 1835: afterwards, a magnetic survey of the British Islands; then, the establishment of a complete observatory at Dublin, with newly arranged instruments, by Dr. Lloyd, in 1838. On all this gathered experience we founded a memorial to Her Majesty's Government, made a grant of 400*l.* from our funds for preliminary expenses, and presented to the meeting of this Association in Birmingham,

in 1839, a report of progress signed by Herschel and Lloyd. From that time how great the labour, how inestimable the fruits! Ross sails to the magnetic pole of the south; America and Russia co-operate with our observers at Kew, Toronto, and St. Helena; and General Sabine, by combining all this united labour, has the happiness of seeing results established of which no man dreamed—laws of harmonious variation affecting the magnetic elements of the globe, in definite relation to the earth's movement, the position of the sun and moon, the distribution of temperature, and the situation in latitude and longitude.

Our efforts have not been fruitless, whether with Mr. Mallet we make experiments on artificial earthshocks at Dalkey, or survey the devastations round Vesuvius, or tabulate the records of earthquakes since the beginning of history; or establish the Kew Observatory as a scientific workshop where new instruments of research are made and proved and set to work; or dredge the sea with Forbes, and Brady, and Jeffreys; or catalogue the stars with Baily; or investigate electricity with Harris, Ronalds, Thomson, and Jenkin; or try the action of long-continued heat with Harcourt: in these and a hundred other directions our attempts to gain knowledge have brought back new facts and new laws of phenomena, or better instruments for attaining or better methods for interpreting them. Even when we enter the domain of practical art, and apply scientific methods to test a great process of manufacture, we do not fail of success; because we are able to join in united exertion the laborious cultivators of science and the scientific employers of labour.

Am I asked to give an example? Let it be iron, the one substance by the possession of which, by the true knowledge and right use of which, more than by any other thing, our national greatness is supported. What are the ores of iron—what the peculiarities and improvements of the smelting processes—what the quality of the iron—its chemical composition—its strength in columns and girders as cast-iron; in rails and boiler plate, in tubes and chains, as wrought iron—what are the best forms in which to employ it, the best methods of preserving it from decay—these and many other questions are answered by many special reports in our volumes bearing the names of Barlow, Mallet, Porter, Fairbairn, Bunsen, Playfair, Percy, Budd, Hodgkinson, Thomson; and very numerous other communications from Lucas, Fairbairn, Cooper, Nicholson, Price, Crane, Hartley, Davy, Musket, Hawkes, Penny, Scoresby, Dawes, Calvert, Clark, Cox, Hodgkinson, May, Schafhaeuti, Johnston, Clay, and Boutigny. Beyond a question, a reader of such of these valuable documents as relate to the strength of iron in its various forms would be far better informed of the right course to be followed in experiments on armour-plated ships and forts to resist assault, and in the construction of ordnance to attack them, than he is likely to be from merely witnessing a thousand trials of the cannon against the target. Anyone who remembers what the iron furnace was forty years ago, and knows its present power of work; or who contrasts the rolling mills and hammers of other days with the beautiful machines which now, with the gentlest motion but irresistible force, compel the strong metal to take up the most delicately moulded form; will acknowledge that, within the period since the British Association began to set itself to the task of reconciling the separated powers of theory and experience, there has been a total change in the aspect of each, to the great advantage of both.

Our undertakings have not been fruitless. We attempted what we had well considered, and had the power to accomplish; and we had the more than willing help of competent persons of our own body, the friendly aid of other institutions, and the sanction of the Government, convinced of the sincerity of our purpose and the wisdom of our recommendations.

The same work is ever before us; the same prudence is always necessary; the same aid is always ready. Great, indeed, should be our happiness, in reflecting on the many occasions when the Royal Society, in particular, and other institutions older than our own, have readily placed themselves by our side, to share our responsibility and diminish our difficulties. But for this, our wishes might not always have prevailed, and the horizon of science would not have been so clear as now it is. Of late years, indeed, societies formed on our model have taken up special parts of our work; and thus to some extent have relieved us of the pressure of communications relating to the practice of particular

professions and the progress of some public questions. Not that scientific agriculture, social statistics, or physiology are neglected in our meetings, but that these and other practical subjects are found to have more than one aspect, and to require more than one mode of treatment. With us, facts well ascertained, conclusions rightly drawn, will ever be welcome, from whatever quarter of the horizon of science they make their appearance. Whatever societies cultivate these objects, they are our allies, and we will help them, if we may. With pleasure we receive proofs of the good work done in limited districts by the many admirable field clubs formed by our countrymen; whether like those of Tyneside and the Cotswolds, and in this immediate vicinity those of Warwickshire, Worcestershire, and Dudley, they explore the minutest recesses of our hills and glens; or, like the rangers of the Alps, bring us new facts regarding glaciers, ancient climate, and altered levels of land and sea.

By these agreeable gatherings natural history is most favourably commended; and in the activity and enlarged views of the officers who conduct them, the British Association recognizes the qualities by which the vitality of scientific research is maintained and its benefits diffused among the provincial institutions of the empire.

Such, Gentlemen, are some of the thoughts which fill the minds of those who, like our Brewster, and Harcourt, and Forbes, and Murchison, and Daubeny, stood, anxious but hopeful, by the cradle of this British Association; and who now meet to judge of its strength, and measure its progress. When, more than thirty years ago, this Parliament of science came into being, its first child-language was employed to ask questions of nature; now, in riper years, it finds on the answers received further and more definite inquiries directed to the same prolific source of useful knowledge. Of researches in science completed, in progress, or in beginning, each of our annual volumes contains some three hundred or more passing notices, or full and permanent records. This digest and monument of our labours is indeed in some respects incomplete, since it does not always contain the narrative or the result of undertakings which we started, or fostered, or sustained; and I own to having experienced on this account once or twice a feeling of regret. But the regret was soon lost in the gratification of knowing that other and equally beneficial channels of publication had been found; and that by these examples it was proved how truly the Association kept to the real purpose of its foundation, "the advancement of science," and how heartily it rejoiced in this advancement without looking too closely to its own share in the triumph. Here, indeed, is the stronghold of the British Association. Wherever and by whatever means sound learning and useful knowledge are advanced, there to us are friends. Whoever is privileged to step beyond his fellows on the road of scientific discovery will receive our applause, and, if need be, our help. Welcoming and joining in the labour of all, we shall keep our place among those who clear the roads and remove the obstacles from the paths of science; and whatever be our own success in the rich fields which lie before us, however little we may now know, we shall prove that in this our day we knew at least the value of knowledge, and joined hearts and hands in the endeavour to promote it.

The sections are now in full work, and Saturday will, it is thought, be generally an off day, in order to give all an opportunity of joining some of the excursions, which are numerous and varied. The crop of papers, if not first-rate, is good, and there are some local papers, we hear, of great value.

J. N. L.

## SCIENTIFIC NOTES.

ANOTHER new planet, No. 84, has been discovered by Dr. Luther, director of the observatory at Bilk, near Düsseldorf. It was first seen at half-past nine on August 25th, on which day, at 10h. 46m. 28s. Bilk mean time its A.R. was  $323^{\circ} 37' 49.1''$ , and its declination N.— $14^{\circ} 20' 47.1''$ . Other particulars are given in the last number of the *Astronomische Nachrichten*.

THE *Moniteur Belge* announces the death of Professor Encke, Director of the Royal Observatory at Berlin. We shall give a notice of his life and his valuable astronomical labours next week.

Two aurochs have recently been presented by the authorities of the Moscow Jardin d'Acclimatation.

# THE READER.

9 SEPTEMBER, 1865.

tation to the Zoological Gardens in the Bois de Boulogne.

THE QUEKETT MICROSCOPICAL CLUB held its first ordinary meeting at its rooms, 32 Sackville Street, Piccadilly, on Friday, August 25th, Dr. Lankester in the chair. The President gave a very interesting inaugural address, in which he sketched the gradual growth of microscopical inquiry, the difficulties which surrounded the observers of the latter part of last and the beginning of the present century. He also described the gradual development of the instrument from the simple lens to its present perfect compound form. He also strongly impressed on the members the necessity of acquiring habits of close investigation and accurate observation, and recommended them to take up and thoroughly investigate special objects of study rather than waste their energies on too wide a field of research. He advocated the use of low in preference to high powers, as being easy to work with and less likely to mislead the beginner in microscopy. The microscope, he observed, was not to be considered as an aimless, luxurious toy, but as a working instrument, by the use of which the boundaries of science may be greatly extended. After complimenting the committee on the title of the club, which he considered aptly chosen, and moreover a graceful compliment to the memory of one whose name will ever be associated with the microscope, Dr. Lankester concluded his address by wishing success to the club. The meeting was numerously attended, and many new candidates for membership were proposed.

THE statue of Arago, at his birthplace, Estagel, in the Basses Pyrénées, was inaugurated on the 31st ult. M. Emmanuel Arago refused to take part in the ceremony, because the circulars, official letters, and programmes only mentioned the *savant*, "forgetting the François Arago who for fifteen years sat as deputy for the Pyrénées-Orientales, forgetting the member of the Provisional Government, the Minister of War and Marine in 1848, and the President of the Executive Committee of 1848." Without protesting against such forgetfulness, the son states that he cannot accept of homage which honours his father as a man of science, but loses sight of his career as a statesman. It is a matter of regret that the descendant of the illustrious academician should not be satisfied with the recognition of Arago's scientific merits. This is the first time, as far as we recollect, that his political claims have been prominently brought forward, and we venture to say that not one person in twenty to whom the name of Arago is familiar as that of a man of science of the highest order knows much about the Arago who, in the stormy June of 1848, marched to the barricades at the head of the mobs.

A NEW modification of gun-cotton has been prepared by M. Blonseau, and described by him in an important paper presented to the last meeting of the French Academy. This new kind of pyroxylene is said to possess a much higher explosive power than the ordinary kind, and, in addition to this, is unalterable, not only at the ordinary temperature, but does not decompose at  $212^{\circ}$ . To bestow these virtues upon gun-cotton it is only necessary to take a good specimen of the usual sort, and expose it for about four hours to the action of ammoniacal vapours. The gun-cotton becomes yellow, and a compound has been formed with the ammonia, having no less a formula than  $C_{24} H_{20} O_{20} N_4 (NO_3) (NH_2)$ . This body, when dried, forms a powder, having the valuable properties we have enumerated.

EXPERIMENTS on nitro-glycerine have recently been made by M. Nabel in the open workings of the tin mines of Altenburg, in Saxony, which prove that the use of this body for blasting purposes is quite practicable, and a paper on this subject was read at a meeting of the Paris Academy. In reference to this we extract the following from *The Chemical News*: "The great advantage of nitro-glycerine is that it requires a much smaller hole or chamber than gunpowder does, the strength of the latter being scarcely one-tenth of the former. If the boring presents fissures, it must first be lined with clay to make it water-tight; this done, the nitro-glycerine is poured in, and water after it, which being the lighter liquid, remains at the top. A fuse is then applied in the usual manner. In one of the experiments referred to a bore-hole 14-inch in diameter was made perpendicularly in a dolomitic rock 60 feet in length, and at a distance of 14 feet from its extremity, which was nearly vertical. At a depth of 8 feet a

vault filled with clay was found, in consequence of which the bottom of the hole was tamped, leaving a depth of seven feet. Nearly three pints of the nitro-glycerine was then poured in—it occupied 5 feet; a match and stopper were then applied, as stated, and the mine sprung. The effect was so enormous, as to produce a fissure 50 feet in length, and another of 20 feet. The total effect has not yet been ascertained, because it will require several small blasts to break the blocks that have been partially detached by this." In reference to this subject, we learn that a severe explosion took place at Stockholm, on the 26th ult., owing to the carelessness of some men who were engaged in filling cartridges with nitro-glycerine for blasting purposes.

THE Russian Society of Naturalists has been authorized to organize at Moscow, in the spring of 1867, an anthropological exhibition. Its object is, first, to increase the public knowledge of anthropology; and second, to be the basis of an anthropological museum. The various races which people Russia will be represented by the particular types of each, and by the different pursuits, costumes, instruments, products, &c., which characterize them.

THE use of common salt in healing wounds has some reasonable foundation, though the ancient and barbarous practice of rubbing the salt into a cut or sore is, it appears, painful and unnecessary. From *The Medical Times* we learn that M. Dewandre has proposed a solution of chloride of sodium as a disinfecting agent in the treatment of wounds. The solution he first uses is made with about twenty-five drachms of common salt, and three pints and a-half of water; but after the patient has been accustomed to the use of this for a few days, he easily bears a saturated solution, care being taken that, in applying this, none of the undissolved salt come in contact with the wound. With this solution the suppurating surfaces are kept constantly moist, using syringing or the douche in cases in which these means seem called for. It should not be applied at the early inflammatory stage, but only when the suppuration has become thoroughly established. Then its effects are most remarkable in combating with great rapidity the foetidity of bad sores and ulcerations, to the great relief of the patient himself and his neighbours. Another effect is also at once produced—viz., the reddening of the black, vitiated, decomposed blood lying amidst the solution of continuity. The coagula which adhere so firmly to the tissues, and are so difficult of separation by mere irrigation without sponging, under the use of the salt water separate readily, leaving a clean reddened surface. The patient is sensible of a sensation of local cold with prickling or itching, and even slight pain, which is very supportable; so that he soon becomes accustomed to the application. The wound is, however, from time to time, syringed with simple water. M. Dewandre has not had a single case of tetanus or hospital gangrene while the salt water has been in use. Patients bear its application for various periods from twenty to forty days, and in exceptional cases even for seventy or eighty days, without any inconvenience manifesting itself.

## SCIENTIFIC CORRESPONDENCE.

### THE GLACIAL EPOCH.

M. CROLL'S suggestion respecting the attraction of a polar cap of ice upon the ocean may be found discussed in "Adhemar's Révolutions de la Mer." He supposes it possible that the polar cap of ice might reach a thickness of twenty leagues. I mentioned this supposition to a well-known geological professor some years ago, and he replied, "Where could the snow come from, when the cap reached above the level of the highest clouds?" But it must be recollected that the same attraction which would draw the aqueous ocean towards either pole, would draw the aerial ocean in the same direction. Without endorsing the views of M. Adhemar (whose calculations I believe to be very imperfect), I would direct Mr. Croll's notice to his work, which he evidently has not read, since he mentions his idea as original.

It must be borne in mind, in any case, that inundations thus caused would not follow, but accompany, *pari passu*, a thickening of the polar ice.—I am, &c.,

O. FISHER.

Brentwood, September 6.  
In the letter of Mr. Croll, published in your columns of September 2, an assumption is made that the Glacial period was one of subsidence during the colder periods and of elevation during the warmer; and I am unwilling that

this should pass without demur. I deny that we have yet evidence of any general submergence at the incoming of the Glacial period, far less of repeated oscillations of submergence and emergence, as Mr. Croll assumes. What may be the case in Scotland is best known to Professor Ramsay and the Scotch geologists; but one of them (Mr. Jamieson) considers the glaciation of Scotland to have been, during the first stage, terrestrial altogether; that period being a cold one, since the surface of the country was enveloped in ice. No one, too, has more vehemently insisted upon the terrestrial glaciation of Scotland than Mr. Ramsay himself. With respect to England, we have very sufficient evidence that the incoming of the Glacial epoch was accompanied by no subsidence of the country, beyond one corner of it, and that England underwent, while in the condition of land, the severest of the glacial conditions to which it was subjected. The oldest glacial beds of England are those of the Cromer coast, wherein the immense included masses of transport, and the contortion of the beds, attest a glaciation not inferior to the existing sounds of Baffin's Bay; but these beds are confined to a part only of the county of Norfolk, and a small portion of Suffolk; and as the rest of England is free of them, while occupied in many parts by the later beds (resting direct on the older formations), it is apparent that the general area of this country was during this period of greatest cold in the state of land. These lower and *most* glacial beds are succeeded, and overlaid unconformably, by a sand and gravel series, indicating a far milder climate; but as these stretch across England, in the form either of two deep inlets, or else of a strait, reaching from the east coast to the Mersey, we have evidence that during this milder period the submergence, although far from general, was greater than during the period of extreme cold. It is only in the last, or uppermost, of the glacial series, the boulder clay, a period of great cold certainly, that we find evidence of a general subsidence; and this was followed by the emergence and denudation under which the construction of England has taken place, from its first condition of many small islands into the form which it now presents. What evidence the countries fringing the north of the European continent or the vast area of the northern portion of North America may afford, is not yet available; and from my own experience of the time and labour involved in the working out of the glacial beds of a part only of England, I venture to assert that it is unlikely that this generation will be in the possession of evidence sufficient to justify it in asserting that the glacial beds of the European and American continents were formed under any one general submergence or the reverse. All that we know at present of these countries is that they have been glaciated in some form.

Without expressing any opinion as to the soundness of views contemplating the existence of an ice sheet ranging up to 7,000 feet in thickness, it seems to me that a result, precisely the opposite of a general submergence would be the consequence; since, as the sea is the source of all water, whether in the vaporous, liquid, or solid form, the abstraction of so large a proportion from the fluid state, and its accumulation in a solid form over the higher latitudes, must necessarily have reduced the general sea-level, and left great areas of its shallower parts in the state of land.

Your mathematical readers can inform us whether a change in the earth's centre of gravity, and particularly such a periodic change in it as Mr. Croll supposes, and at so recent a period as the Glacial, would, or would not, now be capable of detection; and also whether the consequences insisted upon by Mr. Croll as the result of the combined motion of the lines of the apsides and of the earth's nodes would necessarily flow from that motion.

SEARLES V. WOOD, Jun.

## PROCEEDINGS OF FOREIGN ACADEMIES.

### PARIS.

ACADEMY OF SCIENCES.—August 28.—M. Ch. St. Claire Deville contributed a fourth note "On the Periodic Perturbations of Temperature in the Months of February, May, August, and November." It may be remembered that M. Deville made a series of observations on this subject in May last. He now communicates the results of similar observations made by him during the month of August. He gives a table containing the maximum and minimum of the thermometer, exposed and shaded, the quantity

# THE READER.

9 SEPTEMBER, 1865.

of aqueous vapour, the amount of ozone, and the barometric pressure during the "critical periods" of the month of August. This table shows a considerable increase of the mean temperature upon the 10th and 11th of that month. At the middle of the day, when the temperature was at its highest, the quantity of aqueous vapour decreased, but in the evening abundant rains raised its amount. From the 10th to the 13th the amount of ozone decreased, but augmented on the following days. The atmospheric pressure was high from the 6th to the 10th, but was low on the 11th, the day of the maximum of heat. From the 10th to the 15th inclusive the wind was chiefly south. M. Deville remarks that this year the critical period of August was well marked, at least in the neighbourhood of Boulogne, where the observations were made.—M. Victor Meunier contributed a note relating to the question of spontaneous generation, which shows that either the germs are not destroyed by boiling, that they can enter a vessel with a very sinuous neck such as was employed in these experiments, or that the abundant signs of life which the author found must be due to spontaneous generation.—M. Damour read the conclusion of his elaborate memoir "On the Composition of the Stone Adzes Found in Celtic Remains and among Savage Tribes," which he sums up as follows. We see, he remarks, from what precedes, that the men who anciently made the adzes of polished stone, chose, with rare sagacity, precisely the material which alone, with the exception of metal, combines most perfectly the three qualities of density, hardness, and tenacity, the most necessary conditions for such instruments.

Another paper was sent by M. Davaine on the *maladie charbonnueuse* of the cow. The author in this paper gives the details of experiments he has made on various animals, which have led him to the conclusion that this disease of the cow is entirely distinct from that which infests sheep under the name of *sang de rate*, and man by the name of malignant pustule. The rapid death of the animal after the inoculation of the disease, and its communication to birds, are among the reasons assigned by the author for his conclusion, which is opposed to that of MM. Leplat and Jaillard.—M. Caradec presented a memoir "On the Study of Hot Countries, Considered in Relation to Man."

M. Filhol contributed a note "On the Chemical Properties of Chlorophyl." The author has obtained in two successive re-actions four distinct products from chlorophyl: these are a brown, a blue, and two yellow substances, one of which is soluble in alcohol, and the other is analogous to the xanthine of flowers, but not identical with it.—M. Gautier communicated a note "On the Combination of Hydrocyanic and Hydrochloric Acids." Analysis showed this body to have the composition  $\text{CH}_2\text{NI}$ ; the compound is infusible, but when raised to about  $200^\circ\text{C}$ . it decomposes with an explosion, depositing the carbon.—M. Béchamp sent a paper "On the Fermentation of Normal Urine, and on the Different Organisms which Promote It."—M. Blondeau sent a note "On Two New Kinds of Gun-Cotton." The author considers ordinary gun-cotton ought to be regarded as an unstable anhydrous acid, having the composition represented by the formula  $\text{C}_{24}\text{H}_{30}\text{O}_{20}5(\text{NO}_3)_5\text{NH}_2$ , to which he has given the name of cellular nitric-pentamide. This ammoniacal pyroxylene combines with hydrochloric acid, thus forming a compound, which itself has an explosive power as great as ordinary gun-cotton, and detonates at the same temperature, but the products are different; moreover, it does not decompose at ordinary temperatures, nor even at  $212^\circ$ . In our Scientific Notes we have referred to even a superior modification of gun-cotton prepared by M. Blondeau.—"On the Reciprocal Action of Glycerine and Oxalic Acid," by M. Lorin. By heating these bodies together, and gradually supplying additional quantities of oxalic acid, a liquid is obtained, very rich in formic acid. The author states that the re-action is so regular and easy to obtain, that it can be applied on a large scale for the commercial preparation of formic acid. Mono-hydrated crystallizable formic acid was obtained by heating together formic and oxalic acid. M. Lorin also communicated a new mode of preparing formic ethers, which we give in our Scientific Notes.

## ART.

### THE SOUTH KENSINGTON MUSEUM.

AS the construction and decoration of the courts at South Kensington Museum are now sufficiently advanced to allow a correct estimate to be formed of their effect, some notice of them may perhaps be interesting. The north court is a large square area covered by a roof of a single span, and has from its size and height an imposing effect. The construction of the glass ceiling or covering is very simple and ingenious. Each side of the court is divided into three bays, by cast-iron columns: on these rest wrought-iron lattice-work girders, which span the whole space. These girders of course intersect similar girders from the opposite sides, dividing the ceiling into nine spaces. Each space is covered by a pyramidal glass roof, exactly like a gigantic hand-glass. A ceiling of so vast a space as this is, however, more wonderful than beautiful. The effect would probably be improved by handsome columns at the intersection of the girders, while such a construction would, of course, have been much cheaper.

The present arrangement and decoration of the north court are, we believe, temporary. The lower part, up to the string course above the cloister arches, is coloured a deep blood red. The space between the string course and the frieze of the cornice is papered, the colour a cold purple grey. The contrast between this and the dark red has a most savage and unpleasing effect. Violent contrasts, even when inoffensive in themselves, ought to be especially avoided in a museum, where the general effect should be as quiet and unobtrusive as possible. The area of the south court is about equal to that of the north, but when completed it will be larger. Its architectural treatment, and the way in which it is covered in, are completely different from the north court; while that presents the appearance of a vast light ceiled room, the south court is unlike anything hitherto built; it is quite original in its construction and decoration, and to those who care about art matters, it cannot fail to be most interesting. Like the north court, it is constructed of bricks and mortar, iron and glass; there is no wood, and it is absolutely fire proof. It is divided down the centre by what may be called an open-storied corridor, which on the ground-floor forms a passage to the north court, while above it leads to an open balcony commanding a complete view of the north court, and forming a very pretty architectural feature.

Each half of the court is roofed in the following manner: From cast-iron columns placed at intervals of twelve feet spring wrought-iron semi-circular ribs, spanning the whole space, and supporting a common ridge roof of glass and iron. The bays adjacent to the ends of the court are not constructed of glass and iron, but are solidly vaulted, and enclose lunettes of thirty-six feet in diameter. Were it not for the gallery which passes immediately in front of them, there is no public building in Europe which ever presented so tempting an opportunity to a great decorative artist. We are happy to say the decoration of one of these lunettes has been entrusted to Mr. Watts. The slight sketch we have seen for it suggests a grand and imposing work. The soffit of the arches enclosing the lunettes is the most successful part of the decorations, and is a favourable specimen of the work carried on by the Department of Science and Art, under the superintendence of Mr. Godfrey Sykes. It is exceedingly fine in colour as well as design, and is free from the crudeness which so often mars the effect of his otherwise admirable work.

Between the columns that support the roof are the cloister arches, the spandrels being fitted with finely-designed figures engaged in the various processes of art manufacture; above these each space is divided into two niches, giving the upper part of the wall the appearance of being arcaded. It is here that the interest centres; for it is proposed to place in each niche a full-length portrait, in mosaic, of one of the great decorative artists. The designs for most of these are already in their places, and to these we shall shortly revert. Above the niches the wall is diapered with grey and gold. The frieze of the cornice is designed in a very large and effective style, and consists of festoons in grey monochrome on a dark blue ground. The space between this and the skylight is covered with hexagonal draperies, in buff, brown, and gold, enclosed by a border. This part of the decoration has an unfortunate resemblance to a

hearth rug. The ribs of the roof are brown and gold, the sides covered with patterns in blue. The spandrels between the ribs and the roof are filled with perforated iron work, relieved by gilding. The general tone of the decoration of the roof may be said on the right side of the court to be blue, relieved by brown; on the left, brown relieved by blue—for the two divisions are not precisely alike. Having thus taken a general view of the construction and decoration of the court, we will revert to its most interesting feature, the designs for the portraits, beginning at the N.E. corner. The first we come to is *Torrel*, from the pencil of Mr. Burchett, he is represented as pausing in his work, and looking round. The attitude, if not dignified, is natural; the general colour is quiet and unpretending. We do not know what authority Mr. Burchett had for the likeness, but the face bears the appearance of having been painted from an ordinary model. *William of Wykeham* is also by Mr. Burchett: he is represented in his episcopal robes, bearing the model of a church. The figure is simple and monumental in character, but the face is dirty and ill drawn, and singularly deficient in dignity, and the crude apple-green colour of the cope is offensively obtrusive. Those who remember his picture of the procession need hardly be told that we owe to Mr. Leighton the admirable portrait of *Cimabue*: he is dressed entirely in white; the colour, drawing, and expression of the face are beyond praise; the whole pose of the figure is graceful and statuesque; there is, however, a want of firmness in the drawing of the legs, and the figure is thrown back a trifle too much. *Nicolo Pisano* is also by Mr. Leighton, and is even better than his *Cimabue*: he is holding up and examining a small antique bronze. The tone and expression of the face are solemn and dignified. The figure is draped in a black tunic, and over it an ample red cloak, reaching almost to the ground. It is impossible to describe the extreme simplicity of the arrangement of this composition; detail is suggested rather than rendered. The ample cloak falls straight, with hardly a fold; the body is almost equally poised; there is no posing for effect. And yet this figure is conceived with consummate art: it is original, stately, and imposing, and the only fault we have to find with it is, that the eyelids and shadows about the eyes are so red, that they tend to give the face a blear-eyed look. The figures of *Raffaelle* and *Michael Angelo* are by Mr. Sykes, and are painted in a dexterous and firm manner. That of *Michael Angelo* has been too evidently suggested by the well-known French print of *Michael Angelo* and *Raffaelle* in the court-yard of the Vatican. It is well composed, quiet, and dignified, both in drawing and colour, but the features are not sufficiently made out. The *Raffaelle* we must regard as a failure: he is represented as painting his own background, the face averted so much as to present less than a profile. The figure is short, and suggests little of the grace and elegance we invariably associate with the name of *Raffaelle*. The composition is clever, but it can hardly be called a portrait. It has certainly none of the monumental character so necessary in a scheme like the present.

The next in the present order, which is, of course, merely temporary, is *Sir C. Wren*, by Mr. Crowe. The expression of the face is thoughtful, and the pose easy and dignified; and were it not for a want of drawing about the legs and the hip, this figure would be one of the most successful of the series. The *Hogarth*, also by Mr. Crowe, is not equal to the last. The likeness is good, but from the position of the legs, he looks as if he was about to dance. The two next figures, by Mr. Wehnert, *A. Mantegna* and *Ghiberti*, are about equally bad: they are offensively crude in colour, and bad in drawing. *Albert Durer*, by Mr. Cave Thomas, though carefully painted, has been too evidently suggested by the *Knave of Hearts*. *Palissy*, by Mr. Townroe, is picturesquely conceived, and good in colour but fails in detail. The face is ordinary and ill drawn, the hands too large, and the legs clumsy. Mr. Moody's *Luca della Robbia*, though a grand figure, is spoilt by the harshness of the features, the tendency to clumsiness in the figure, and heaviness in the drapery. *Phidias* is a male, and *Apelles* a female model, arranged in classical drapery, and carefully painted by Mr. Poynter: they are both cold, classical, and well composed, and are very far from being the worst conventional portraits in the room. *Primaticcio* is a mean-looking man in a big cap. Mr. Scott's *P. Vischer* is a burly Saxon blacksmith, not overburthened with wits. *Jean Goujon*, by Mr. Bowler, is not devoid of a certain grace and elegance. The head, though

# THE READER.

9 SEPTEMBER, 1865.

feeble painted, is thoughtful in expression, and the general colour is quiet and well balanced. This is altogether one of the least objectionable figures in the court. Mr. Morgan's *Inigo Jones* has, perhaps, a little too much swagger, but is otherwise a good figure : it is painted with freedom and precision. It is somewhat remarkable that this is the only figure in black. The expression of Mr. Cope's *Fra Angelico* is almost saintlike, and the attitude is devotional, but the colour is cold and the execution fluffy. The *Giorgione*, by Mr. Prinsep, looks like a "pretty horsebreaker" at a *bal masque* : it is well drawn and well coloured, but as a portrait of Giorgione is decidedly objectionable. *Fiammingo*, by Mr. Ward, R.A., is a portrait of an ordinary-looking young man, in the dress of a cavalier. The right foot is twisted in an impossible manner. *Maestro Giorgio*, by Mr. Hart, R.A., is represented holding up one of the vases that have shed such a lustre on his name : he has pale blue tights, a greenish-blue Jersey, a leathern apron, and a rather Jewish expression of face.

This completes the series of the designs already *in situ*. With few exceptions, these portraits do little credit to the English school. As one glances along the wall and sees the commonplace faces, the mean drawing, the crude colour, the total want of power and knowledge, we cannot but feel that by this exhibition a blot has been exposed in our modern art education. To conceive and execute a figure, we will not say in a grand and impressive manner, but simply to represent a man as standing properly on his feet, seems to be beyond the power of even our experienced artists ; while the colour of these portraits is so crude and distracting, that we actually long for the peaceful repose of a good thick coat of whitewash. If this is the result of all our disquisitions about art, and of the modern tendency to realistic treatment and excessive attention to detail, the sooner we return to more old-fashioned ways the better. We have so long and so systematically deprecated the display of academic power, that our artists seem to think the safest way to avoid so great an error, is to take care not to acquire the power at all.

The Department of Science and Art deserves the thanks of the country for inaugurating so interesting and appropriate a scheme for the decoration of their museum ; and by calling in the aid of so many different artists, has done more to direct the attention of the profession to decorative art than could have been achieved by quires of minutes and reports ; and the objects for which the department has been instituted are probably as much furthered by the artistic failure of this scheme as they would have been by its success, for the failure has drawn the attention of the whole art world to the partial and imperfect character of our art education ; and this is the great obstacle to be contended with in promoting that decorative taste and power which is so necessary to the success of so many of our manufactures. Let us hope that the intention of executing the whole series in mosaic will not be persevered in. Mr. Leighton's *Pisano* has been already rendered in mosaic, by Signor Salviati, of Florence, and may now be seen *in situ* at the N. W. corner of the south court. This is most admirably done ; but the very excellence and accuracy of the copy takes away any hope we may have had of the rest of the series being rendered more tolerable by the conventional uniformity of a coarse but splendid material. And it is to be hoped that the country will be spared the expense and the disgrace of rendering so much bad work a great deal too permanent. There is another objection to the use of mosaic in the proposed decorations. Mosaic ought to be embedded in nothing less permanent than stone. Surrounded or framed by painted wood or plaster, it is singularly out of place, while, from the richness of its surface, it makes the work that encloses it look starved and mean.

## MUSIC.

### THE FESTIVAL OF THE THREE CHOIRS.

Gloucester, September 5.

THIS is the one hundred and forty-second time, according to the bills, that the choirs of our three sister cathedrals have met in festival. Let us hope that our musical forefathers had a more peaceful time of it, for in these latter days, to confess the truth, our harmonic gatherings have given rise to "wars and fight-

ings" not a few. Venerable as the institution is, it has had to struggle for existence, and prophets of ill have been foretelling for some time past that it was near its end. Hereford had last year a prosperous celebration ; but as the turn of Gloucester came round, and the bustle of preparation began, mishaps and disputes, many and diverse, seemed to threaten an utter fiasco. Here we are, however, in mid-festival, and all has been, on the whole, prosperous, if not triumphant.

That mistakes have been made is evident enough to all ; but considering all the difficulties of the case, it would be hard to say that they had been very culpable ones. The fact is that music, while it has difficulties of its own, in the matter of organization, has also safeguards of its own. It is easy enough to blunder in the management of a festival, but it takes a tremendous amount of blundering to make a real failure. The elements dealt with are so splendid, that let them be tossed together with ever so little art, they must make a superb combination. Take a mediæval cathedral, the music of Mozart and Handel, a respectable body of singers, fiddlers, trumpeters, and the rest, and set the combination to work, it will be hard if the result has not some grandeur and beauty in it—grandeur and beauty enough to satisfy ordinary appetites. Thus it has been this year at Gloucester. "There reigns a new king in Egypt." Dr. Samuel Sebastian Wesley, the new cathedral organist, is *ex officio*, by a traditional rule, the manager in chief. He has put together quite an unexampled programme, and collected a quite unexampled corps of artists ; but the programmes are being performed, and the artists are singing, and the Minster is thronged to hear them, and the dwellers in the Vale of Severn, as they drive away to their homes, seem as if they could not have looked happier if Mr. Sims Reeves had sung "Cujus anima" instead of Herr Gunz, and the light of the episcopal presence had been shed over the scene, instead of perversely withdrawing itself in solemn rebuke of these profanities. For the Palmerstonian prelate who fills the seat of the old abbots of Gloucester is, it seems, one of those timid souls who think that the cathedral is desecrated by solemn and lovely music, that it is wicked to do in the house of God in Gloucester that which the "bright seraphim in burning row" are represented as doing in the face of the "great white throne." Sooner, therefore, than be ear-witness to the enormity of the hallelujahs of Handel and Beethoven pealing through the aisles of his cathedral, he has preferred to take an episcopal holiday across the seas. The Dean, too, the official custos of the building, is hostile. So the poor festival had had spiritual as well as carnal foes to fight against—clerical animosities as well as the troubles that come from the professional feuds. On this last source of grief I care not to enlarge here. If Dr. Wesley differs from Mr. Sims Reeves and Madame Dolby as to the money value of the services of great vocalists, it does not follow that either party is absolutely wrong. The affair is simply a "strike," a reduction of the question of supply and demand to a practical issue. It is a pity, certainly, that these ugly quarrels of political economy should invade the serene realms of Art ; but the incident will not, perhaps, be altogether harmful. It may teach both sides to be more considerate. It may remind singers that there is, in practice, some limit to the selling value of even the most exceptional talent ; and it may read a lesson to entrepreneurs as to the comparative wisdom of grudging and of liberal payment. Into the merits of the dispute no one of course can judge who does not know the whole of the facts, but there is no harm in saying that so far as I can gather from the talk that I hear about me, the verdict of the public is for the singers and against the manager. I am sure many of today's audience would have paid something considerable to have been spared *some* of the singing that they heard.

To come, however, to my task of recording the achievements of each day. Yesterday's cathedral music, which did not begin till after midday, the service and customary sermon for the charity, by a cathedral dignitary, taking up the forenoon, was made up of the first part of "St. Paul" and Spohr's "Last Judgment," or as it is now becoming the fashion to call it (since the details given in the late biography have called attention to the inaccuracy of the popular title) "Die Letzten Dinge." The practice of

cutting great works in half is at the best a questionable one, but its application to "St. Paul" might perhaps have been pardoned, had sufficient reason been shown, for it happens that in this instance the two parts of the book are quite distinct. The weakness of "St. Paul," dramatically speaking, is that it has no climax. The "second part" is a series of detached scenes having but slight connexion with each other, and finishing with the parting of the Apostle with his eastern flock. The "first part," on the other hand, is a drama complete in itself, the martyrdom of Stephen, the burial, the journey in the desert, and the celestial vision, being a connected series of scenes which lead up to the final climax of the conversion. But how can Dr. Wesley have imagined that after the sublime music in which Mendelssohn has wrapped that great argument, the "Last Judgment" of Spohr could sound otherwise than pale, weak, and gloomy ? There is noble music in it certainly, and a strain of religious tenderness which can never fail to charm sensitive ears or pious souls ; but after the "St. Paul"—no, Spohr will decidedly not do. Mr. Thomas did his best with the lengthy bass recitations, which are meant to be solemn, but are only dull ; and Herr Gunz did his best too ; and the choruses were well sung (considering the difficulties with which they bristle), but the effort was weariness itself ; even those two sweet and solemn choruses with solo quartets seemed to fail of their accustomed charm ; after the full broad stream of Mendelssohn's music, the ear could not enjoy this minute mosaic work. This was indeed a mistake of Dr. Wesley's ; he should have given us the whole of "St. Paul." But even that first part was worth coming a long way to hear. A twelvemonth ago I listened to perhaps the grandest performance of the work which has ever been given—that in the Town Hall of Birmingham ; but in one feature at least this was finer. Mr. Santley sang the bass solos : they are apt generally to sound rather tedious, but none could have wished his "Consume them all" to have been shorter. More noble utterance of noble words I never listened to than in his delivery of the plaintive appeal, "Oh blot out my transgressions!" and of the exulting hymn of thanksgiving, "I praise thee, oh Lord." The impression made upon the audience by this magnificent singing was visible enough. So was that which followed Mdlle. Titien's delivery of that most pathetic of airs, "Jerusalem, thou that killst the prophets." As has been said before in these columns, the effect of the clear tones of a woman's soprano voice heard in one of these old buildings—I am thinking merely of the physical conditions, without any reference to the poetic suggestions of the *entourage*—is something wholly unique and indescribable. The choruses, as usual, profited by the same cause. The "Burial Chorus" is one of those things which, whenever you hear it, sounds as if it had never sounded so beautiful before ; but I thought that in the nave of Gloucester its divine calm was really more overpowering than it had been even in the Town Hall of Birmingham. Of Dr. Wesley's conducting, which it would be unfair to dismiss in a sentence, I will speak in another letter. Of the choir he has to direct it will be enough to say that it is of very ordinary quality. Its deficiencies, however, are mostly of a kind which the nature of its constitution sufficiently accounts for. Thorough good choral singing cannot possibly be had upon the system at present followed here ; but even taking things as they are, I cannot help wondering at the badness of the tone of the tenors, and at the weakness of the sopranos. Speaking of the effect of the choruses, it is important to notice how wonderfully that effect changes as the listener changes his position. The rule, which all habitual listeners know to be generally true of all buildings, applies with especial force to performances in the great forests of stone—always go as far away as you can from the performers. If it was not for a ponderous "perpendicular" screen which a benighted restorer of forty years back interposed between choir and nave, the choir would be by far the best place to sit in (the orchestra being under the great west window). As it is, the sound you get there is lovely ; the softest notes of the solos reach the ear with a distinctness which seems absolutely perfect, and the mass of sound produced by the whole orchestra comes to you with a soundness and purity which is quite enchanting. For those who like also to see the orchestra, the best place, without any doubt, is the extreme end of the nave. The public, however, as is its wont, presses and crowds and fags to get close under the noses of the singers, where it has the double

# THE READER.

9 SEPTEMBER, 1865.

pleasure of a near scrutiny of Mdlle. Titien's bonnet and a distinct appreciation of the separate and individual virtues of Mr. Chipp's drums. I must not dismiss this first morning's performance without adding, that Miss Eleanor Wilkinson acquitted herself very well in the rather difficult part of substitute for Madame Dolby. She sang the popular *arioso*, "But the Lord is mindful of his own," with a steadiness and simplicity which made a decided impression in her favour. Her vocal phrasing is pure and distinct, and her manner is singularly refined; but it must be added, by way of caution against such substitutions in future, that the post of first contralto *assoluta* demands physical resources which this young lady has not got. And while talking on the subject of substitutes, I will add, to get rid once for all of a disagreeable subject, that Herr Gunz's performances, *vice* Mr. Sims Reeves, have been simply absurd. There may, or may not, be good reasons for dispensing with the services of the popular tenor; but it is at any rate preposterous to supply his place, or part of his place, by a singer who has less qualifications for the part than an average lay-clerk taken at random from a cathedral choir. Seriously, I cannot remember that I ever heard a professed first tenor sing worse than this gentleman in the "Sanctus" from the "Last Judgment," and in to-day's miscellaneous selection. To call such a thick, throaty, laboured utterance of coarse sounds as he gave us in "Cujus animam" singing, would be a simple perversion of language. It is sufficiently wonderful that such a performance should be accepted anywhere, even in Germany, as music—that an English musician of Dr. Wesley's experience should put it before an English audience as being by implication better than he can get from any Englishman, *but one*—is a marvel indeed.

But *malgré* all this, as I have said before, this festival is a pleasant festival. As it will not close till this number is in type, I will leave for another letter the notice of to-day's performance—a miscellaneous but brilliant one, including the immortal "Requiem" of Mozart, and of the evening concerts.

## THE DRAMA.

THE season is approaching when all the London theatres will be in full play, and some persons may say the drama will revive; but the scholarly portion of society know full well that things theatrical and things dramatical are very different in their essentials. There has lately sprung up a notion, urged by a vigorous set of young writers, that criticism would alter this state of things, and that the million could be drilled into a high taste for the pure poetical drama; and that slashing criticism would reform the vices and the follies of public places of amusement. This idea is commendable as far as the mental purity and loftiness of the enthusiasts are concerned, but a very little practical knowledge would show them that the tastes of the theatre are as obdurate to intellectual castigation as the other modes which fashion dictates and rules. Queen Elizabeth, with Burleigh to back her, dare not interfere with bear and bull-baiting; and she was compelled, as sovereign, to witness, and so encourage it, as our own beloved Queen thought it necessary in the early part of her reign to be present at a battue, to witness deer-stalking, including the death of the stag, and to patronise Van Amburgh, the Lion Tamer. The predominant taste of the age has put an end to the brutalities of Hockley in the Hole, and the poor bulls and bears are no longer tortured for the pleasure of the people. Still pugilism lingers amongst us; and badger-baiting and cock-fighting are occasionally indulged in by persons of a high station. All this shows how inefficient lecturing, sermonising, and criticism are, until the manners of the people are changed. It may be said that slashing criticism produces this change; but if we watch closely the change of manners, it will be found that the delicate, indirect ridicule of Addison and Steele did more to purify the stage than the slashing criticism of Jeremy Collier, or the puritanical diatribes, such as that of Prynne's *Histrionastix*. Vehe-

ment objurgation may indeed sometimes raise a fanatical spirit which must end in the destruction of an art; but even this is only temporary, as was proved by the utter destruction of the stage by the Puritans in 1647, and its revival in 1660, at the Restoration, with a virulence of licentiousness that has not been surpassed.

If there be one thing more than another at which society sets up its back, and refuses to be affected by, it is any set attack upon its favourite follies and vices. M. Dupin, in Paris, makes a sensible, eloquent, and touching speech on the evils engendered by the vagaries of modern female dress. The senator is listened to, and even admired, for his eloquence and height of sentiment; but a vehement female publishes a trumpery pamphlet in answer, and all Paris approves of it; and the ladies go on filling up the parks and public grounds with enlarged crinoline; and the cook fries her eels in the same form of dress; and the damsel who furnishes her with fish indulges in the monstrosity. All Paris thinks M. Dupin a stupid old frump, and the lady who answers him so impudently a smart, delightful creature. Slashing criticism is certainly unavailing; and we must wait till the fancies of the ladies take another turn, and until the Figaro gentlemen and the less demonstrative critics have softened the public feeling, and made crinoline ridiculous. What is good for one department of those arts that depend on the fancies and likings of the many is good for another; and it is of no avail to read a combination against burlesques and horseriding. They may not be, and they undoubtedly are not so good as pure tragedies and comedies; but it is no use offering pippins to people who have taken a dislike generally to apples. Sensible writers have long perceived this, and so slashing criticism is at a discount; not because writers are venal, but because audiences are obdurate. Criticism may certainly do some service; it may encourage the genuine, it may expose the false, it may take everything according to its class; and it may contrive to insinuate sermons out of stones, and find some good in any kind of imaginative production. We need not, when we go to the Alexandra Theatre, regret that the ancient five-act drama is not played; and when we see one of Mr. Boucicault's very cleverly-devised melodramas, we need not contrast it with the axiomatic tragedies of Euripides. Good sense, in fact, may be exercised in the critical art, as in all others, without subjecting the writer to a charge of blindness and incapacity, or of corruption and venality. In truth, the literary and artistic thread is as full of mingled yarn as that of life, and good and ill are so closely commingled, that it becomes the chief duty of the critic to separate the good from the bad. To run a muck only requires a brutal nature; to assist and encourage the excellent takes much more patience, geniality, and perception. We should do our spiring gently, as says the author who, above all others, has done most to purge the public mind of vices, crimes, and follies.

The theatres are gradually resuming their work. The Haymarket, owing to the energy of Mr. Walter Montgomery, did not close at all; and he has continued during his brief management, which ends on the day we publish, to give at all events a great variety of entertainments. His saving production, however, has been Mr. Burnand's burlesque of "Ixion," which, played by a bevy of smart young ladies, has supplied the treasury with funds. Mr. Montgomery, however, affects great devotion to the grand five-act drama and has therefore played "Hamlet," "Othello," and "King John;" and not quite to empty benches. Nor can it be said that he has done so with vain-glory, for he engaged Mr. Aldridge, the negro actor, to personate *Othello*, which he does with great ability, his actual black complexion being the least of his qualifications. He has also introduced a Miss Robertson,

an actress of much intelligence, to the London stage, and recalled Mrs. Rodgers, a lady of the Siddonian school. But his attempt to place a new five-act tragedy on the stage utterly failed; "Fra Angelo" only producing laughter, from its excess of objurgation, the monstrosity of its villainy, and the deficiency of truth, nature, and pathos. Mr. Tupper's legitimate play of "King Alfred" closes the season; but we are not in a condition to speak of its quality.

The Princess's has kept on its course with "Arrah-na-Pogue," and will continue to do so, though a new piece by Mr. Boucicault is talked of.

The Olympic continues to play nothing but "The Serf," though that drama has lost its chief attractions in Miss Kate Terry and Mr. Wigan, both of whom have taken a holiday. The burlesque of "Camaralzaman," which was denounced universally by the critics, is highly approved of by the manager and the public, and is likely to figure in the bills for some time to come.

The Adelphi opened on Monday, re-embellished and burnished up, with a spic-and-span new drama on an old subject, "Rip Van Winkle," in which an American actor, Mr. J. Jefferson, made his first appearance before an English audience. The drama, by Mr. Boucicault, in itself is sufficiently stagey; but the character of the drunken, dreamy Dutch-American, who drinks his sense and character away, and is supposed for twenty years to be under the influence of the potion administered by the phantom Hudson and his abandoned route of spirits, is rendered in the minutest and most artistic manner by Mr. Jeffuson. The personation is complete, and is never lost sight of by the actor for a moment. Every look, every action—and they are numerous and varied—is an elucidation of the character, and the reiterated touches that make up the strong portrait are given with fine artistic breadth and the fullest dramatic force. The pourtrayal of a kindly and manly nature under the constant influence of intoxication would be repulsive in any but the highest artist; and Mr. Jefferson cleverly pourtrays all the various emotions under this constant veil of an excited intellect, that it quite redeems the character from being a mere literal representation of drunkenness. The acting after the supposed mystical sleep of twenty years was very true, as the exemplification of a bewildered and benumbed mind gradually awakening to a number of revived emotions. It, however, lacked that elevation of mind and manner which might well belong to a half supernatural being. The entire performance is, nevertheless, one of remarkable excellence and interest, and is sure to attract considerable attention. The drama, as a drama, is commonplace, but not without theatrical interest.

The New Royalty, Dean-street, which has obtained a reputation for glittering and fast-going burlesques, has opened with a comic operatic company, consisting of Miss Reeves, the directress; Miss Susan Galton, niece of Miss Pyne, who made a successful *début* at Her Majesty's Theatre; Mr. Eliot Galer, as the tenor; and Mr. George Honey, as the buffo—a sufficiently efficient company for so small a theatre. A new comic opera, entitled "Castle Grim," the music by Mr. Allen, the author of "Harvest Home," a cantata produced at St. James's Hall, and of anthems at Oxford; and the libretto by Mr. Reece, M.A., of Oxford, was produced on Saturday night with perfect success. Mr. William Brough has also furbished up his clever burlesque of "Amabel," noting the latest events; and Mr. Honey makes more of *Turco the Terrible* than any one else; and indeed plays it with inimitable humour and spirit.

To secure punctual delivery in Scotland, Ireland, and the Provinces, THE READER is published every Friday Afternoon at Two o'clock.

# THE READER.

9 SEPTEMBER, 1865.

## NEW BOOKS. MACMILLAN & CO., LONDON.

In a few days will be published, VOL. VII., price 10s. 6d.  
THE CAMBRIDGE SHAKESPEARE.

### THE WORKS OF WILLIAM SHAKESPEARE.

Edited by W. G. CLARK and W. ALDIS WRIGHT.  
(To be completed in Nine Vols., demy 8vo, each 10s. 6d.)

CONTENTS.—Romeo and Juliet : a reprint of the 4to Edition of 1597—Timon of Athens—Julius Caesar—Macbeth.

"We regard the appearance of the Cambridge Shakespeare as an epoch in editing the works of the foremost man in the dramatic world. Besides many positive virtues in this edition, the hitherto prevailing errors are avoided. The gross blunders and unauthorized fancies of generations of editors are banished from the text ; the more tolerable or the less noxious conjectures are removed to the notes ; space is allowed and justice is rendered to all former labourers in the editorial field. He who is indifferent to verbal criticism may read in peace an orthodox text ; and he who is curious in such matters will find various readings supplied to him in full measure."—*Saturday Review*.

This day is published, fscp. 8vo, cloth, price 6s.,  
**BROTHER FABIAN'S MANUSCRIPT** ;  
and other Poems. By SEBASTIAN EVANS.

This day is published (the same size as the "Golden Treasury Series"), neatly and strongly bound in cloth, price 4s. 6d.,

### A BRIEF BIOGRAPHICAL DICTIONARY.

Compiled and Arranged by CHARLES HOLE, B.A., Trinity College, Cambridge.

The Publishers venture to believe that this little comprehensive work will become as indispensable to all English readers as an English Dictionary.

"An invaluable addition to our manuals of reference, and from its moderate price it cannot fail to become as popular as it is useful."—*Times*.

MR. PALGRAVE'S TRAVELS IN ARABIA.  
Two Vols., 8vo, cloth, with a Portrait of the Author, Map and Plans illustrating the Route, price 28s.,

### A NARRATIVE OF A YEAR'S JOURNEY THROUGH CENTRAL & EASTERN ARABIA, 1862-3.

By WILLIAM GIFFORD PALGRAVE,  
Late of the 8th Regiment Bombay N.I.

"Unique in many respects, it is, upon the whole, the most important work of travel which has issued either from the English or Continental press for very many years."—*Saturday Review*.

### LETTERS FROM EGYPT, 1863-65.

By LADY DUFF GORDON.  
Crown 8vo, cloth, price 8s. 6d.

"Written in a singularly captivating and vigorous English style. They possess the rare virtue of enabling the reader to realize the position of the writer and the true aspect of the people."—*Edinburgh Review*.

NEW BOOK FOR TOURISTS.  
THE SCENERY AND GEOLOGY OF SCOTLAND.

Crown 8vo, cloth, 10s. 6d.  
With a NEW GEOLOGICAL MAP of SCOTLAND,  
By Sir Roderick I. Murchison and A. Geikie,

### THE SCENERY OF SCOTLAND, IN CONNEXION WITH ITS PHYSICAL GEOLOGY.

By ARCHIBALD GEIKIE.  
With Illustrations.

"We hope that 'The Scenery of Scotland' will find a place in many a tourist's bag this year. It is just the book to supplement his 'Black' or 'Anderson'."—*Glasgow Herald*.

Also for Tourists, 2 Vols., crown 8vo, 21s.,  
**A PAINTER'S CAMP IN THE HIGHLANDS:**

AND THOUGHTS ABOUT ART. By P. G. HAMERTON.

PROFESSOR MASSON'S NEW BOOK.

Fscp. 8vo, cloth, price 7s. 6d.,

### RECENT BRITISH PHILOSOPHY:

A Review with Criticisms, including some Comments on Mr.

Mill's Answer to Sir William Hamilton.

By DAVID MASSON.

MACMILLAN & CO., London.

This day is published,  
**MACMILLAN'S MAGAZINE.**

No. LXXI. (for SEPTEMBER, 1865).

PRICE ONE SHILLING.

CONTENTS :

I. THE DOVE IN THE EAGLE'S NEST. By the Author of "The Heir of Redclyffe."

Chap. XIII.—The Eagles in the City.

„ XIV.—The Double-Headed Eagle.

II. PALGRAVE'S TRAVELS IN ARABIA. By E. S. P.

III. ERASMUS IN ENGLAND. By JAMES HAMILTON, D.D., F.L.S.

IV. MACDONALD OF SLEAT.

V. GALWAY ; OR, THE CITY OF THE TRIBES. By Professor D'ARCY W. THOMPSON.

VI. CRADOCK NOWELL: A TALE OF THE NEW FOREST. By RICHARD DODDRIDGE BLACKMORE.

Chapters XXI.—XXIV.

VII. TO AN ABSENT FRIEND.

It will also contain a

NARRATIVE OF THE ATLANTIC TELE-

GRAPH EXPEDITION OF 1865,

WITH FACSIMILES OF THE OFFICIAL CHARTS,

LITHOGRAPHED ON BOARD THE GREAT EASTERN.

Showing her Track, Soundings, Miles of Cable Daily paid out ;

also the various Positions of the Ship while Grappling for the Cable.

By JOHN C. DEANE (who Accompanied the Expedition).

VOLUMES I. to XI., handsomely bound in cloth, price 7s. 6d. each.

MACMILLAN & CO., London and Cambridge.

Sold by all Booksellers, Newsagents, and at all Railway Stations.

## NEW EDUCATIONAL WORKS BY W. DAVIS, B.A., Author of "Arithmetical Examples," &c.

NOW READY.

I.

**THE COMPLETE ENGLISH SPELLING**  
and DICTATION BOOK, for Home and School use, containing, in carefully graduated Spelling Lessons, a complete view of all the Difficulties and Irregularities of the English Language, with copious Dictation Exercises. Cloth, 1s. 6d.

II.

**THE JUNIOR ENGLISH SPELLING**  
and DICTATION BOOK ; being the simpler half of the "Complete" book, for Preparatory Schools and Junior Classes. Cloth, 9d.

III.

**THE SENIOR SPELLING and DICTATION BOOK** ; being the advanced half of the "Complete" book for the use of Senior Scholars. Cloth, 9d.

London : LONGMAN, GREEN, & CO., Paternoster Row.

Now Ready,

Imperial 16mo, 826 pp., cloth, 10s. 6d. ; half morocco, 13s.,

### THE STUDENT'S ENGLISH DICTIONARY, ETYMOLOGICAL, PRONOUNCING, & EXPLANATORY.

Prepared specially for the Use of Colleges and Advanced Schools.

By JOHN OGILVIE, LL.D.

Illustrated by about 300 Engravings on Wood.

London : BLACKIE & SON, 44 Paternoster Row.

### NEW VOLUME OF ESSAYS.

Now ready, in 1 Vol., post 8vo, cloth, bevelled edges, 9s.,

### THOUGHTFUL MOMENTS.

By ONE OF THE PEOPLE.

"Prove all things : hold fast that which is good."

London : SAUNDERS, OTLEY, & CO., 66 Brook Street, W.

**NOTICE.—The English Edition of the JOURNAL of EUGENIE DE GUERIN** will be published in a few days, price 7s. 6d.

The Edinburgh Review says : "It is a remarkable proof of the impression made in France by this book, that it has gone through ten editions in less than two years. . . . We have never read a more touching record of devoted piety, sisterly affection, and 'love strong as death.'"

SIMPKIN, MARSHALL, & CO., Stationers' Hall Court ; and at all Libraries.

### HERBERT'S POEMS.

New Edition, Illustrated, crown 8vo, cloth, gilt back, red edges, 2s. 6d.

**HERBERT'S (GEORGE) POEMS**, and the PRIEST to the TEMPLE, with Life of the Author. By the Rev. J. LUROX, A.M.

London : WILLIAM TEGG, Pancras Lane, Cheapside.

This day is published,

**BRITISH CONCHOLOGY.** By J. GWYN JEFFREYS, F.R.S., F.G.S., &c. VOL. III., post 8vo, with Nine Plates, 12s.

JOHN VAN VOORST, 1 Paternoster Row.

Preparing for publication,

**A THEORETICAL INQUIRY into the PHYSICAL CAUSE of EPIDEMIC DISEASES**, accompanied with Copious Tables. By ALEXANDER HAMILTON HOWE, M.D., Hon. East India Company's Service.

JOHN CHURCHILL & SONS, New Burlington Street.

Published by JOHN CLEMENTS, Little Pulteney Street, price 7d., a New Work on the Teeth.

**PURE DENTISTRY**, and WHAT it DOES FOR US. By A. ESKELL, Grosvenor Street, W.

"From the great success of the previous work on Dental Surgery by the same author (which has gone through five editions), we anticipate the above will be read with avidity by all classes who are interested in discriminating between pure and meretricious dentistry."

Sold by SIMPKIN & MARSHALL, and may be had of all Booksellers.

## ADAPTED FOR

### YOUTHS, SCHOOLS, & FAMILIES.

**Corner's Accurate Histories**, 13 in Series, commencing at the earliest period and continued down to the present time. In addition to their general truthfulness, they are interspersed with useful descriptions of the manners, and domestic habits, and condition of the people, in different epochs of their history.

"Miss Corner has, in a manner most clear, succinct, and truthful, narrated the great events of the Histories of Spain and Portugal, Germany, Holland, and Belgium, Italy, and other countries. They might be read with advantage by multitudes of parents as well as children. The language is so simple that children must comprehend it, but with so free from childish insipidity that an adult may read it with pleasure."—*Athenaeum*.

**Corner's History of England and Wales**, Sixty-seventh Thousand. New Edition, enlarged, Steel Plates, Map, Pictorial Genealogy of the Monarchs of England, and Illustrations of the Principal Events, Chronological Table, and Index. 3s. 6d. bound ; or, with Questions, 4s.

**Corner's History of Rome, from accepted English and Foreign Authorities**,—Dr. Arnold, Niebuhr, Keightley, Macpherson, Smith, &c. With Questions, 2s. 6d. Map of the Empire, Chronological Table, and Index.

"This is a truly faithful and useful work, well adapted for Youth, whether at school or at home. The latest and best authorities have been consulted, and the substance of the discoveries and comments freely adopted."—*Herald*.

**Corner's History of Greece**, after the same approved style as her "Rome," with Questions, 2s. Map and Chronological Table, and Index. Nineteenth Thousand.

**Corner's History of Italy**, from the earliest period to the establishment of the Kingdom. New Edition, cloth gilt, with Map and Steel Plate. 2s. 6d.

**Corner's History of Ireland**, 2s. 6d. bound. 14th thousand, Plates, Map, Chronological Table, and Index ; with Questions, 3s.

**Corner's History of Scotland**, 2s. 6d. bound. Plates, Map, Chronological Table, and Index. Eighteenth Thousand ; or with Questions, 3s.

**Corner's History of France**, 2s. 6d. bound. Plates, Map, Chronological Table, and Index. Twenty-second Thousand, New Edition ; with Questions, 3s.

**Every Child's History of England**, with Questions to each Chapter, adapted to the Junior Classes. By Miss CORNER. Price 1s. sewed ; or 1s. 6d. bound in cloth, with the Map coloured.

**Every Child's History of Rome**. With Map and Questions for Examination at end of each Chapter. By EDWARD FARR. Adapted for the Junior Classes. 1s. or cloth boards, 1s. 6d.

**Every Child's History of France**. With Seventy Cuts of Monarchs, Questions, and Map. By E. FARR. 1s. ; cloth, 1s. 6d.

**Every Child's Scripture History**. With Two Maps—Palestine in the Time of Our Saviour, and Wanderings of the Children of Israel from Egypt to the Promised Land. With Questions, as "Rome." 1s. ; or cloth, 1s. 6d.

**Every Child's History of Greece**. With Map, &c., as "Rome." 1s. ; or cloth, 1s. 6d.

**Papa and Mamma's Easy Lessons in GEOGRAPHY**. By Miss SARGEANT. A Companion to Miss Corner's "Play Grammar Illustrated, or the Elements of Grammar explained in Easy Games." 1s. sewed ; or 1s. 6d. cloth.

**The Play Grammar**; or, the ELEMENTS of Grammar Explained in Easy Games. With Illustrations. By Miss CORNER. Price 1s. ; or cloth, 1s. 6d.

**Scripture History Simplified**. By J. KITTO, LL.D. and Miss CORNER. Price 3s. 6d., in a clear type, royal 16mo. Second Edition, with Chronological Table, and Index, and two large Maps.

**Scripture Natural History**. By the Rev. J. YOUNG, M.A., and ANNA MARIA SARGEANT. Seventy Illustrations, cloth gilt, 2s. 6d.

**Charles Butler's Guide to Useful Knowledge**; Containing in the form of an easy Catechism a complete Series of the Newest and most Useful Information connected with the Arts, Sciences, and the Phenomena of Nature. Twenty-seventh Edition, 1s. 6d., cloth boards.

**Charles Butler's Guide to Geography**: A new and concise description of the Five Great Divisions of the Globe ; their natural, mineral, and vegetable productions, and the characteristics of their inhabitants. New Edition, improved by E. FARR. Tenth Thousand, 1s. 6d. in cloth ; or, with the use of the globes, and SEVEN GLYPHOGRAPHIC MAPS, 2s. cloth boards.

**Hendry's Illustrated History of Greece**. New Edition, by Miss CORNER. Cloth, 1s. 6d.

**Hendry's Illustrated History of Rome**. New Edition, by Miss CORNER. Cloth, 1s. 6d.

# THE READER.

9 SEPTEMBER, 1865.

## THE NATIONAL STANDARD LIFE AND FIRE INSURANCE COMPANIES (LIMITED).

*Chief Offices.*  
1 & 2 CHATHAM PLACE, BLACKFRIARS, E.C.  
*General Manager.*  
R. R. HUTCHINSON, F.R.G.S., F.A.S.L.

### LIFE DEPARTMENT.

#### SPECIAL FEATURES OF THE COMPANY.

Policies absolutely indisputable and indefeasible.  
Part of Claims paid on notification of death, and balance  
within one month after proof of death.

#### TABLE A, WITH PROFITS.

Annual Premiums for Assuring £100 on a Single Life, payable  
at death.

Age	Premium.	Age	Premium.	Age	Premium.	Age	Premium.
20	£ 1 16 0	30	£ 2 7 0	40	£ 3 2 0	50	£ 4 7 7

### FIRE DEPARTMENT.

Every description of Property insured against loss by fire.  
No Extra Charge for Policy Stamps or Policies.

AGENTS WANTED. Apply to Chief Office.

## ACCIDENTS TO LIFE OR LIMB, IN THE FIELD, THE STREETS, OR AT HOME,

Provided for by a Policy of the

RAILWAY PASSENGERS' ASSURANCE COMPANY,  
64 CORNHILL, LONDON, E.C.

### COMPENSATION HAS BEEN PAID FOR 10,000 CLAIMS.

£1,000 IN CASE OF DEATH,  
£6 per Week while laid-up by Injury, secured by an Annual  
Payment of from £3 to £5 5s.

For Particulars apply to the Clerks at the Railway Stations, to  
the Local Agents, or at the Offices, 64 CORNHILL, and 10  
REGENT STREET.

W. J. VIAN, Secretary.

## IMPERIAL FIRE INSURANCE COMPANY.

No. 1 Old Broad Street, and Nos. 16 and 17 Pall Mall, London.  
Established 1803.

Subscribed and Invested Capital and Reserved Fund, £1,000,000.  
Losses paid, £3,000,000.

Fire Insurances granted on every description of property, at  
home and abroad, at moderate rates.

Claims liberally and promptly settled.

All Policies are now entitled to the recent reduction in the  
duty to 1s. 6d. per cent., whether covering buildings, furniture,  
or stock.

ANDREW BADEN, Superintendent.

## SOUTH AUSTRALIAN BANKING COMPANY.

Incorporated by Royal Charter.

Every description of Banking Business conducted with South  
Australia, New South Wales, Victoria, and also by Agency with  
New Zealand, upon current terms with the respective Colonies.

WILLIAM PURDY, Manager.

London: 54 Old Broad Street, E.C.

**PARTHIDE & COZENS,**  
MANUFACTURING STATIONERS, 192 FLEET  
STREET, corner of Chancery Lane.—Carriage paid to the  
Country on Orders exceeding 20s.—The LARGEST and most  
varied Stock in the Kingdom of Note, Letter, and Foolscape  
Papers, Envelopes, Account and MS. Books, Household Papers,  
&c.—PARTHIDE & COZENS' celebrated GUINEA CASE OF STATIONERY  
forwarded free to any Railway Station in England on receipt of  
Post-office Order.—NO CHARGE for Plain Stamping Crests, Arms,  
or Address on Paper or Envelopes. Coloured Stamping (Relief)  
reduced to 1s. per 100. Polished Steel Crest Dies engraved for  
5s. Business or Address Dies from 3s.—SCHOOL STATIONERY  
supplied on the most liberal terms.—Illustrated Price List of  
Inkstands, Despatch Boxes, Stationery Cabinets, Postage Scales,  
Writing Cases, &c., post free.

PARTHIDE & COZENS, 192 Fleet Street, E.C.

**IMPORTANT ANNOUNCEMENT.—**  
JOSEPH GILLOTT, METALLIC PEN-MAKER to the  
QUEEN, begs to inform the commercial world, scholastic in-  
stitutions, and the public generally, that, by a novel application  
of his unrivalled machinery for making steel pens, he has in-  
troduced a new series of his useful productions which, for  
excellence of temper, quality of material, and, above all, cheap-  
ness in price, must ensure universal approbation, and defy  
competition.

Each pen bears the impress of his name as a guarantee of  
quality; they are put up in boxes containing one gross each,  
with label outside, and the fac-simile of his signature.

At the request of numerous persons engaged in tuition, J. G.  
has introduced his warranted school and public pens, which  
are especially adapted to their use, being of different degrees of  
flexibility, and with fine, medium, and broad points, suitable for  
the various kinds of writing taught in schools.

Sold Retail by all Stationers and Booksellers. Merchants and  
Wholesale Dealers can be supplied at the Works, Graham Street,  
Birmingham; at 91 John Street, New York; and at 37 Grace-  
church Street, London.

**GLENFIELD PATENT STARCH.—**  
Messrs. WOTHERSPOON & Co. have been appointed  
Starch Purveyors to H.R.H. the PRINCESS OF WALES. This Starch  
is used in the ROYAL LAUNDRY, and was awarded a PRIZE MEDAL  
1862. Sold by all Grocers, Chandlers, &c.

WOTHERSPOON & Co., Glasgow and London.

PATRONIZED BY HIS ROYAL HIGHNESS THE LATE  
PRINCE CONSORT

## T. COOKE & SONS,

OPTICIANS, &c.,

31 SOUTHAMPTON STREET, STRAND,  
LONDON;

FACTORY—

BUCKINGHAM WORKS,  
YORK.

ASTRONOMICAL TELESCOPES, METEOROLOGICAL  
INSTRUMENTS, THEODOLITES,

LEVELS, SEXTANTS, DRAWING INSTRUMENTS, &c.,

SPECTROSCOPES,

POCKET AND MARINE TELESCOPES, OPERA AND  
TOURISTS' GLASSES, SPECTACLES, &c.

ASTRONOMICAL CLOCKS AND REGULATORS.

Price List on application.

CHURCH, TURRET, & STABLE CLOCKS,

BY  
T. COOKE & SONS,

31 SOUTHAMPTON STREET, STRAND, LONDON.

FACTORY—

BUCKINGHAM WORKS, YORK.

NEWLY-DESIGNED TOURISTS' TELE-  
SCOPES and BINOCULAR LANDSCAPE GLASSES,  
possessing rare and valuable Optical qualities.

The Workmanship is of the Highest Class in every respect.

TOURISTS' TELESCOPE.....	£1 1 0
BINOCULAR LANDSCAPE GLASS .....	2 2 0
LARGER TOURISTS' TELESCOPE .....	2 2 0
LARGER BINOCULAR LANDSCAPE GLASS .....	3 10 0

An ILLUSTRATED DESCRIPTION, giving full particulars, will be  
forwarded Post Free on application.

EDMUND WHEELER, Manufacturer, 48 Tollington Road,  
Holloway, London, N.

THE WORLD-RENNED

WHEELER AND WILSON

PRIZE MEDAL

LOCK-STITCH SEWING MACHINES

FROM £9 AND UPWARDS,

With all recent Improvements and Additions.

**THE WHEELER & WILSON LOCK-STITCH SEWING MACHINES**, have obtained First-class Prizes and Medals against all competitors at every Exhibition and Fair in Europe and America, in which they have been exhibited, and are now universally admitted to be the best Machines, made in the best manner, and doing the very best work for the Family or Manufactory. They are easily worked, easily learnt, cannot get out of order, and may be used by a child. The extraordinary success of the Wheeler and Wilson Machine is exemplified by their exhibiting at the Dublin Exhibition their 200,000th Machine, most beautifully and elaborately got up. Instructions gratis to all purchasers. Illustrated Prospectus gratis and post free.

OFFICES AND SALE ROOMS, 139 REGENT STREET,  
LONDON, W.

WILCOX AND GIBBS'

NOISELESS

FAMILY SEWING MACHINE.

SILENT, SIMPLE, COMPACT, ARTISTIC, EFFICIENT,  
DURABLE, AND CHEAP.

THE MOST PERFECT FAMILY MACHINE.

Printed Directions with every Machine. Instructions gratis.

All Machines Warranted.

Illustrated Price Lists gratis and post free. Inspection invited.

PRICE from £8.

135 REGENT STREET, LONDON.

**SAUCE.—LEA & PERRINS'**  
WORCESTERSHIRE SAUCE.

This Delicious Condiment, pronounced by Connoisseurs

"THE ONLY GOOD SAUCE."

Is prepared solely by LEA & PERRINS.

The Public are respectfully cautioned against worthless  
imitations, and should see that LEA & PERRINS' Names are on  
Wrapper, Label, Bottle, and Stopper.

ASK FOR LEA & PERRINS' SAUCE.

\* \* Sold Wholesale and for Export, by the PROPRIETORS,  
Worcester; Messrs. Cross & Blackwell; Messrs. Barclay  
& Son, London, &c., &c.; and by Grocers and Oilmen  
universally.

## TEETH AND PAINLESS DENTISTRY.

Messrs. LEWIN & SIMEON MOSELEY & SONS,

DENTISTS,

30 BERNERS STREET, OXFORD STREET, and 448  
STRAND (Opposite Charing Cross Railway Station). Established  
1830. Their Teeth are cheaper, more durable, natural,  
and comfortable than any yet produced. They are self-adhesive,  
affording support to loose teeth, rendering unnecessary either  
wires or ligatures, require but one visit to fit, and are supplied  
at prices completely defying competition. Operations of  
every kind being unnecessary, the most nervous patient can be  
supplied without fear of pain or inconvenience. Consultation  
free. Teeth from 5s. Sets, 5, 7, 10, to 25 Guineas, warranted.  
For the efficacy, utility, and success of this system, *vide*  
"Lancet."

Daily attendance at 15 Whitefriargate, Hull; 10 Norfolk  
Street, Sheffield; 4 East Parade, Leeds; and 14 St. Nicholas  
Street, Scarborough.

"OBSERVE."

\* \* Estab. 1830. No connexion with any one of the same name.

### DENTAL SURGERY.

Observe, Mr. Ephraim Mosely can only be Consulted in London  
at his Residence, 9 Grosvenor Street, Grosvenor Square.

IMPORTANT IMPROVEMENT IN ARTIFICIAL  
TEETH, and GREAT REDUCTION IN PRICES.

**M. EPHRAIM MOSELEY,**  
9 Grosvenor Street, Grosvenor Square, sole inventor and  
patentee of ARTIFICIAL TEETH on a soft, elastic, chemically-  
prepared India-rubber gum. No wires or unsightly fastenings  
are required; they are more natural, durable, and comfortable  
than any yet introduced. They are self-adhesive, render support  
to the adjoining teeth, and are supplied at prices within  
the reach of all.

Clergymen, Lecturers, and Public Speakers will find this  
system particularly adapted to their wants; it combines complete  
enunciation and perfect mastication. Consultation free.  
Inspection invited.

\* \* Observe—No connexion with any one of the same name.

"Ephraim Mosely on the Teeth" fully explains his system  
and exclusive Patent. Free on application.

### TEETH.—DENTAL SELF-MANAGE-

M. ESKELL'S  
PATENTED INVENTION in the CONSTRUCTION of  
ARTIFICIAL TEETH. Free on application, or by post on  
receipt of one stamp.—8 Grosvenor Street, Bond Street.

**OIL of HORSE CHESTNUTS** (applied externally). This Oil, at first used only for Gout, is now proved to be applicable in all cases of Chronic and painful Diseases, curing Gout, Rheumatism, Sciatica, Neuralgia, Lumbago, Stiff Joints, Cubiculosis, Boils, Swellings, &c. In bottles, with directions, at 2s. 6d., 4s. 6d., and 10s. 6d., from the principal Chemists, or by post on receipt of stamps. Genuine only of REW and CO., Operative Chemists, 282 Regent Street, W.

**CANDLES.—HER. MAJESTY'S GOVERNMENT**  
have adopted, for the Military Stations, FIELD'S Prize  
Medal PARAFFINE CANDLES, with Hexagonal-shaped  
Tops, made by

J. C. & J. FIELD,

Who beg to caution the public against spurious imitations.  
Their Label is on the Packets and Boxes.

Sold by all Dealers throughout the Kingdom. Wholesales  
and for Exportation at the Works, UPPER MARSH, LAMBETH,  
LONDON, S., where also may be obtained their

CELEBRATED UNITED SERVICE SOAP TABLETS, and the NEW  
CANDLE, Self-fitting, requiring neither Paper nor Scrapping.

**DELEVINGNE**, Importer of Foreign Wines,  
Brandy, and Liqueurs, 51, Oxford Street, W.

Pale, dry, dinner Sherries, soft and delicate, 2s., 3s., 3s., and  
4s. a doz.

Port, 3s., 4s., 4s., 6s., doz.

Claret-Médoc, St. Emilion, St. Estèphe, St. Julien, 18s., 21s.,  
24s., 30s., doz

# THE READER.

9 SEPTEMBER, 1865.

## THE LIBRARY COMPANY LIMITED.

CENTRAL OFFICES—25 PALL MALL, & 30 ST. JAMES'S SQUARE, LONDON, S.W.

CITY BRANCH—69 KING WILLIAM STREET, E.C.

BRIGHTON BRANCH—32 NEW ROAD (Three Doors from North Street).

MANCHESTER BRANCH—60 LOWER KING STREET.

With THREE HUNDRED AGENCIES in Town and Country.

SUBSCRIPTIONS FROM 10s. 6d. PER ANNUM, UPWARDS.

Lists of Books in Circulation, Rates of Subscription, and all other information, forwarded (free) upon application.

By order,

HENRY FOWLER, Secretary.

25 Pall Mall, London, S.W.

DEDICATED BY SPECIAL PERMISSION TO  
HIS ROYAL HIGHNESS THE PRINCE OF WALES.

The Art-Journal,

For SEPTEMBER (price 2s. 6d.), contains

LINE ENGRAVINGS after—

BARON WAPPERS' "DEATH OF COLUMBUS,"  
J. C. HOOK'S (R.A.) "PASSING CLOUD," and  
TURNER'S "PEVENSEY BAY."

THE LITERARY CONTRIBUTIONS include

KARL FRIEDRICH LESSING. By J. B. ATKINSON. Illustrated.

LOWTHER CASTLE.

LIVERPOOL POTTERY AND CHINA. By L. JEWITT. Illustrated.

ART-RAMBLES IN BELGIUM. Illustrated.

THE RIVAL MUSEUMS—BLOOMSBURY AND KENSINGTON.

THE FRENCH INTERNATIONAL EXHIBITION OF 1867.

AMELIA OPIE. By Mr. and Mrs. S. C. HALL. Illustrated.

ANGLO-FRENCH SKILLED WORK AT THE CRYSTAL PALACE.

CHURCH'S PICTURES OF COTOPAXI, CHIMBORAZO, AND THE AURORA BOREALIS

ART-UNION OF LONDON—PRIZE EXHIBITION, &c., &c.

London: VIRTUE & CO., 26 Ivy Lane.

NEW QUARTERLY REVIEW.

The Anti-Teapot Review.

A MAGAZINE OF POLITICS, LITERATURE, AND ART.  
Edited by Members of the Universities, and written solely by  
Members of the Anti-Teapot Society of Europe.

The ANTI-TEAPOT REVIEW is published in February, May,  
August, and November.

HOULSTON & WRIGHT, 65 Paternoster Row, E.C.  
WHEELER & DAY, 106 High Street, Oxford.  
COLDER, London Road, Reading.

The Shilling Magazine.

No. V., for SEPTEMBER, 1865.

CONTENTS:

PHEMIE KELLER, Chapters XV. and XVI. By the Author of "George Geith of Fen Court," &c. (Illustrated by J. D. WATSON.)

A POOR POET TO HIS LOVE.

ON THE WORTH OF A CLASSICAL EDUCATION. By BONAMY PRICE.

THE FOUNDLING HOSPITAL.

EDUCATION IN CHINA. Part II. By Sir JOHN BOWRING.

MAURICE CLIFFORD. A Tale.

OUR TOUR THROUGH THE HIGHLANDS.

"THE KNIGHT OF THE KNIFE." By CHARLES B. GIBSON.

"CHRISTIE AND MANSON'S." By the EDITOR. Illustrated by R. T. PRITCHETE.

THE ELFIN HORN.

THE WILD FLOWER OF RAVENSWORTH. Chapters XIII., XIV., and XV. By the Author of "Dr. Jacob," &c. (Illustrated by PAUL GRAY.)

London: THOMAS BOSWORTH, 215 Regent Street, W.

This day 8vo, cloth 5s., post free, Vol. I, containing the first four numbers.

The Shilling Magazine.

Illustrated.

A MISCELLANY OF LITERATURE, SOCIAL SCIENCE, FICTION, POETRY, ART, &c.

Edited by SAMUEL LUCAS, M.A., Queen's College, Oxford.

London: THOMAS BOSWORTH, 215 Regent Street, W.

## EDUCATIONAL WORKS

PUBLISHED BY

TRÜBNER AND CO.,

60 PATERNOSTER ROW, LONDON.

	s. d.
AHN'S GERMAN METHOD .....	3 0
KEY to Ditto .....	1 0
AHN'S GERMAN GRAMMAR. Second Edition. By Dr. DAWSON TURNER...	5 0
AHN'S GERMAN DIALOGUES .....	2 6
BENEDIX' COMEDY: DER VETTER. With English Notes .....	2 6
APEL'S SPECIMENS for TRANSLATION into GERMAN .....	4 6
GEHLSCHLAGER'S GERMAN DICTIONARY .....	4 0
AHN'S FRENCH METHOD. First and Second Course, in 1 Vol.....	3 0
AHN'S THIRD FRENCH COURSE: READER .....	1 6
AHN'S FRENCH DIALOGUES.....	2 6
LE BRUN'S MATERIALS for TRANSLATING into FRENCH. New Edition.....	4 0
VAN LAUN'S FRENCH READER .....	5 0
Ditto FRENCH GRAMMAR. First Part—Accidence. ....	2 6
Ditto ditto Second Part—Syntax. ....	2 6
Ditto ditto Third Part—Exercises. ....	3 6
WELLER'S FRENCH DICTIONARY. New Edition.....	7 6
NUGENT'S FRENCH POCKET DICTIONARY .....	3 0
AHN'S ITALIAN METHOD .....	3 6
KEY to Ditto .....	1 0
MILLHOUSE'S ITALIAN DIALOGUE'S .....	2 0
Ditto ITALIAN DICTIONARY. Two Vols. New Edition. ....	12 0
VELASQUEZ'S SPANISH GRAMMAR. ....	6 0
Ditto SPANISH READER ...	6 0
Ditto SPANISH CONVERSATION.....	2 0
Ditto SPANISH DICTIONARY .....	21 0
Ditto ditto Abridged. ....	10 6
D'ORSEY'S PORTUGUESE OLLEN-DORFF .....	7 0
Ditto PORTUGUESE DIALOGUES ..	3 6
AHN'S DUTCH GRAMMAR .....	3 6
BOJESEN'S DANISH GRAMMAR .....	5 0
REIFF'S RUSSIAN MANUAL .....	2 6
CORNET'S RUSSIAN DIALOGUES.....	3 6
RASK'S ANGLO-SAXON GRAMMAR. By THORPE. Second Edition .....	5 6
BENFEY'S SANSCRIT GRAMMAR.....	7 6
AHN'S ELEMENTARY LATIN GRAMMAR By Dr. W. IHNE.....	3 0
OLLENDORFF'S LATIN GRAMMAR...	6 0
KUHNER'S LARGER GREEK GRAMMAR .....	10 6
Ditto ELEMENTARY GREEK GRAMMAR .....	6 0
SPRUNER'S HISTORICAL HAND ATLAS .....	15 0
MENKE'S ATLAS of the OLD WORLD. ....	5 0
KARCHER. QUESTIONNAIRE FRANCAIS. Questions on French Grammar, Idiomatic Difficulties, and Military Expressions. By THEODORE KARCHER, LL.B. Pp. viii.—112. 12mo, cloth limp .....	2 6
Ditto ditto Interleaved. ....	3 6

London: TRÜBNER & CO., 60 Paternoster Row.

9 SEPTEMBER, 1865.

# SCIENTIFIC AND POPULAR WORKS

PUBLISHED BY

## ROBERT HARDWICKE, 192 PICCADILLY.

**SOWERBY'S ENGLISH BOTANY.**

VOLUME I. contains all the

Rues,	Waterlilies,	Rockets,
Anemones,	Poppies,	Stocks,
Crowfoots,	Fumitories,	Lady's Smocks,
Spearworts,	Mustards,	Cresses,
and other Plants ranked under the Natural Orders		
Ranunculaceæ to Cruciferae.		

VOLUME II. contains all the

Mignonettes,	Catchflies,	Spurreys,
Rockroses,	Campions,	Waterworts,
Pansies,	Chickweeds,	St. John's Worts,
Sundews,	Stitchworts,	Mallows,
Milkworts,	Sandworts,	Flaxes,
Pinks,	Pearlworts,	Crane's Bills,
Geraniums,		
and other plants ranked under the Natural Orders,		
Resedaceæ to Sapindaceæ.		

Vols. I. and II. (Seven Parts each), complete in cloth, 38s.; half-morocco, 42s.; whole morocco, 48s. 6d.

VOLUME III. contains all the

Furzes,	Melilotis,	Pears,
Brooms,	Trefoils,	Strawberries,
Restharrowes,	Clovers,	Cinquefoils,
Vetches,	Plums,	Brambles,
Lucernes,	Cherries,	Roses,
Medicks,	Apples,	
and other Plants ranked under the Natural Orders,		
Leguminiferae and Rosaceæ. Eight parts at 5s.;		
complete, in cloth, 48s.; in half-morocco, 47s.; whole		
morocco, 53s. 6d.		

VOLUME IV. contains all the

Willow-herbs,	Saxifrages,	Chervils,
Evening-Prim-	London-Prides,	Woodbines,
roses,	Parsleys,	Bedstraws,
Nightshades,	Water-Parsnips,	Valerians,
Water-Milfoils,	Hare's-ears,	Lettuces,
Curraints,	Water-Dropworts,	Teasels,
Stone-crops,	Worts,	Seabiouses,
and other Plants ranked under the Natural Orders		
Lythraceæ to Dipsaceæ.		

Nine Parts at 5s.; complete in cloth, 48s.; in half-morocco, 52s.; whole morocco, 58s. 6d.

"Will be the most complete Flora of Great Britain ever brought out. This great work will find a place wherever botanical science is cultivated, and the study of our native plants, with all their fascinating associations, held dear."—*Athenaeum*.

As all the Parts are kept in print, Subscribers can commence taking the work whenever they like.

**THE GRASSES of GREAT BRITAIN.**  
Containing life-sized, full-coloured Drawings, with magnified Organs, of 144 British Grasses, and Observations on their Natural History and Uses. Described by C. P. JOHNSON. Illustrated by J. E. SOWERBY. Royal 8vo, price £1 14s.

**THE USEFUL PLANTS of GREAT BRITAIN.** A Treatise upon the Principal Native Vegetables capable of Application as Food or Medicine, or in the Arts and Manufactures. By C. P. JOHNSON. Illustrated by J. E. SOWERBY. 300 Coloured Illustrations. Beautifully bound for presents, price 12s.

**THE BRITISH FUNGI (a Plain and Easy Account of).** With especial Reference to the Esculent and other Economic Species. By M. C. COOKE. With Coloured Plates of 40 Species. Fsep. 8vo, price 6s.

**MICROSCOPIC FUNGI (a Plain and Easy Guide to the Study of).** By M. C. COOKE. Plates of over 300 Figures, coloured by hand. Fsep. 8vo, 6s.

"No one with a microscope of common power need want rational amusement, if he will but hunt for microscopic objects such as those which Mr. Cooke has introduced to notice. . . . A great deal of instruction will be found under each head on a variety of subjects most interesting to the cultivator and others, and Mr. Cooke has not failed to apply to the latest sources of information. . . . The volume is so reasonable as regards price, that there is no excuse for not referring to the original, which we recommend to the notice of all horticulturists who wish to know something of a very large and troublesome class of diseases."—*Gardeners' Chronicle*.

"To all the possessors of a microscope this small and prettily illustrated book is specially to be recommended. . . . As an introduction to the study of the different genera of minute fungi, it is well adapted, as it is profusely illustrated with coloured figures, and written in a very pleasing, intelligible style. The objects described and delineated offer to microscopic observers an illimitable field for interesting observation."—*Field*.

"There is a thoroughness about Mr. Cooke's writings which, to our minds, always makes his communications to the public welcome. . . . Mr. Cooke is not content to gather information from cyclopedias or other standard works, classify and adapt the same, and then give a new form to the thoughts of others. On the contrary, he strikes out a new study, and, after a laborious course of analysis, produces an entirely original work; one on which nothing of the kind had before been attempted. . . . The interesting volume before us is greatly enriched by nearly three hundred coloured examples of fungi, by Mr. Sowerby."—*Wesleyan Times*.

**THE BRITISH FERNS.** A Plain and Easy Account of British Ferns, wherein each Species is described under its respective Genus, and the characteristics of those Genera given in words of common use. With a Glossary of Technical Terms. Fully Illustrated. Fsep. 8vo, cloth, price 2s. 6d. plain, 4s. coloured.

**THE FERN COLLECTOR'S ALBUM.** A Descriptive Folio for the reception of Natural Specimens of the Principal Ferns of Great Britain. With Explanatory Remarks to aid the Collector in recognizing the different Species; the Localities in which each Fern is usually found; and simple directions for Out-door and In-door Cultivation. Price £1 1s., elegantly bound.

**INDEX FUNGORUM BRITANNICORUM.** A complete Index to the British Fungi. Demy 8vo, 2s. 6d.

*The same as Herbarium Labels, in 3 Parts, at 1s. each.]*

**BRITISH WATER-WEEDS or ALGÆ** (A Handbook of). By Dr. J. E. GRAY, late President of the Botanical Society of London. The Diatomaceæ. By W. CARRUTHERS, F.L.S. Fsep. 8vo, price 3s. 6d.

**BRITISH BEETLES (A Plain and Easy Account of).** By W. H. GROSER, F.G.S.

*In the Press.*

**BRITISH REPTILES (A Plain and Easy Account of).** By M. C. COOKE.

*In the Press.*

**BRITISH LAND and FRESH-WATER SHELLS (A Plain and Easy Account of).** By RALPH TATE.

*In the Press.*

**BOTANIC TERMS (A Manual of).** Fsep. 8vo. Upwards of 300 Illustrations, 2s. 6d.

**A MANUAL of STRUCTURAL BOTANY.** By M. C. COOKE, Author of "Seven Sisters of Sleep," &c. Illustrated by more than 200 Woodcuts. 1s.

**RAY SOCIETY PUBLICATIONS.**

*A Catalogue of these beautiful Natural History Works will be forwarded on application.*

**HALF-HOURS with the MICROSCOPE.**

By EDWIN LANKESTER, D. Illustrated by 250 Drawings from Nature by TUFFEN WEST. New Edition much enlarged, with full Description of the various parts of the Instrument. Price 2s. 6d. plain; 4s. coloured.

**ON MOUNTING MICROSCOPIC OBJECTS:** Including full Directions for Preparing and Mounting every Description of Object by the most approved Processes. By THOMAS DAVIES. Fsep. 8vo, 2s. 6d.

**WILD FLOWERS worth NOTICE.** A Selection from the British Flora of some of our Native Plants which are most attractive for their Beauty, Uses, or Associations. By Mrs. LANKESTER. Illustrated by J. E. SOWERBY. Fsep. 8vo, cloth, coloured by hand, 4s.; plain, 2s. 6d.

"We are so frequently asked by our country friends to recommend books on flowers and ferns that shall be interesting without being too scientific, that we are heartily glad to have the opportunity of so doing which the present elegant but cheap volume affords."—*Practical Farmers' Chronicle*.

**OLD BONES; or, Notes for Young Naturalists.** By the Rev. W. S. SYMONDS. Second Edition, much improved and enlarged; with Guide to the Typical Specimens in the British Museum. Fsep. 8vo, price 2s. 6d. Fully Illustrated.

**THE ASTRONOMICAL OBSERVER.**

A Handbook for the Observatory and the Common Telescope. By W. A. DARBY, M.A., F.R.A.S., Rector of St. Luke's, Manchester. Price 7s. 6d., royal 8vo, cloth.

"A very suggestive book for amateur observers who have good telescopes."—Sir John Herschel, Bart.

**THE APPLICATIONS of GEOLOGY to the ARTS and MANUFACTURES.** Six Lectures delivered before the Society of Arts. By Professor D. T. ANSTED, M.A., F.R.S. Fsep. 8vo, cloth, Illustrated, price 4s.

"As they have not only the merit of being useful, but extremely interesting, they will doubtless meet with wide appreciation."—*Weekly Dispatch*.

"The science of geology largely engages the attention of the public; but persons are frequently deterred from the study of it by the dry and tedious style of writers. Professor Ansted has supplied a book which meets the public want. . . . Those relating to agricultural geology have an especial interest for farmers; but the whole are deeply interesting and worthy of recommendation."—*News of the World*.

"Professor Ansted takes in hand a subject of some difficulty, but of universal importance. He describes the different kinds of mineral veins, their contents, and the methods adopted to extract those contents, and thus fitly concludes his labours in elucidation of the practical application of geological knowledge to economic purposes, especially in connexion with the arts."—*Daily News*.

"Those interested in these matters cannot do better than purchase this little volume."—*Building News*.

"These lectures are studiously practical, designed to gain merely a broad general view of the science, and to introduce the subject of the various practical applications of geology, and the design is carried out with a simplicity and lucidity well calculated to incite further study."—*Civil Service Gazette*.

**METAMORPHOSES of MAN and ANIMALS.** Describing the changes which Mammals, Batrachians, Insects, Myriapods, Crustacea, Annelids, and Zoophytes undergo whilst in the Egg; also the Series of Metamorphoses which these beings are subject to in After-life. Alternate Generation, Parthenogenesis, and General Reproduction treated *in extenso*. With Notes, giving references to the works of Naturalists who have written upon the subject. By A. DE QUATREFAGES. Translated by HENRY LAWSON, M.D. Crown 8vo, cloth, 6s.

**PROFESSOR HUXLEY on DARWIN'S ORIGIN OF SPECIES;** being Six Lectures to Working Men, delivered at the Museum of Practical Geology:—

Present Condition of Organic Nature—Past Condition—Method by which Causes of Present and Past Conditions of Organic Nature are to be discovered—The Origin of Living Beings—Perpetuation of Living Beings—Condition of Existence as affecting Perpetuation of Living Beings—Critical Examination of position of Mr. Darwin's Work in relation to the complete Theory of the Causes of the Phenomena of Organic Nature. Crown 8vo, cloth, 2s. 6d.

**CHEMISTRY.** By Professor BRANDE, D.C.L., F.R.S.L., and Professor ALFRED S. TAYLOR, M.D., F.R.S., F.R.C.P., London. Fsep. 8vo, price 12s. 6d.

"The best guide to the study of chemistry yet given to the world."—*Lancet*.

"Gives, in the clearest and most summary method possible, all the facts and doctrines of chemistry."—*Medical Times*.

**THE STREAM of LIFE on our GLOBE.** An Attempt to reproduce, in the plainest language, some of the Newest and most Interesting Discoveries relating to the First Appearance of Man upon Earth, and the gradual Growth and Laws of Life. By J. L. MILTON, M.R.C.S. Second and Cheaper Edition, 6s.

CONTENTS: Beginning of Life—First Dwellers on Earth—First Builders—First Wanderers—First Colonists of Sacred History—First Language—First Alphabet—The Battle of Life—The Laws of Life—Life in the Blood—Life in the Nerves—Life of a Giant—Life of Men of Genius—Life in the Waters—Life in the Stars.

**A MANUAL OF POPULAR PHYSIOLOGY;** Being an Attempt to Explain the Science of Life in Untechnical Language. By HENRY LAWSON, M.D., Professor of Physiology in Queen's College. Man's Mechanism—Life, Force, Food, Digestion, the Blood, Respiration, Heat, the Skin, the Kidneys, Motion and Locomotion, Nervous System, Organs of Special Sense, &c. Fsep. 8vo, with Ninety Illustrations, 2s. 6d.

**FIRST HELP in ACCIDENTS:** Being a Surgical Guide in the Absence of immediate Medical Assistance. By C. H. SCHAILLE, M.D. Fully illustrated. 2s. 6d.

Bites,	Choking,	Hanging,
Bleeding,	Cold,	Poisoning,
Broken Bones,	Dislocations,	Scalds,
Bruises,	Drowning,	Sprains,
Burns,	Exhaustion,	Suffocation,

and other Accidents where instant aid is useful.

LONDON : ROBERT HARDWICKE, 192 PICCADILLY.